

The Manual of the fill

The property of the State of the

多多 医红斑 医外侧性 计图片

A GARAGE ANALY SHEET SHEET

福用。从中国国际有效的国际大利

Volume 144, Number 10 October 1987

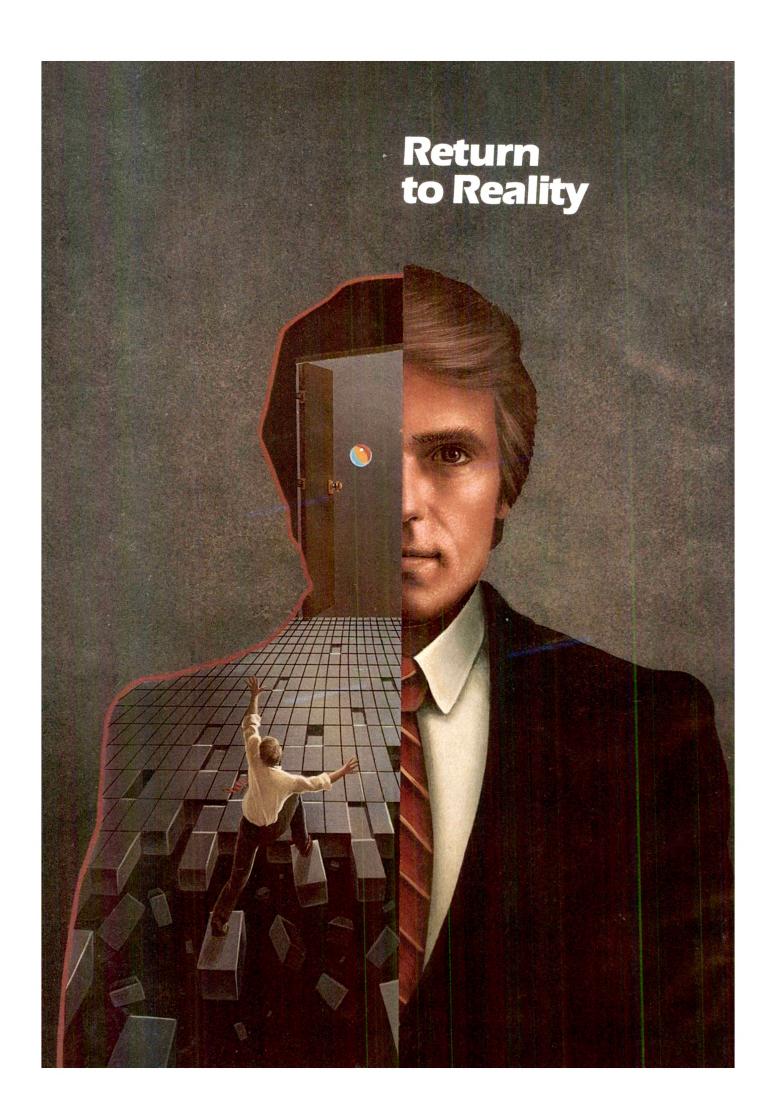
A STATE OF THE PARTY OF THE PAR

In this issue:

The Dexamethasone Suppression Test: An Overview of Its Current Status in Psychiatry By the APA Task Force on Laboratory Tests in Psychiatry

Clinical Implications of Adult Developmental Theory By Calvin A. Colarusso and Robert A. Nemíroff

Official Journal of the American Psychiatric Association



P. 24, 363

Luck-Ho 16bt - 29-24363

Be sure you're the doctor always write

Stelazine®

Discourse the doctor always write

Stelazine®

trifluoperazine HC Tablets: 1, 2, 5 and 10 mg Concentrate: 10 mg/ml

Be sure you're the doctor...

Hec 6.4.88

Helps Put the Coronic Schizophrenic Back in Touch



- ☐ Effectively controls psychotic target symptoms
- ☐ Apparently activates withdrawn, apathetic or detached patients
- ☐ Seldom causes excessive sedation
- Demonstrates a low risk of anticholinergic effects and hypotension
- Offers a convenient, economical b.i.d. dosage

'Stelazine' shares the increased risk of extrapyramidal symptoms associated with all high-potency neuroleptics. However, when encountered, these symptoms are generally readily controlled.

Stelazine®

brand of trifluoperazine hydrochloride

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. The following is a brief summary.

Contraindications: Comatose or greatly depressed states due to C.N.S. depressants, blood dyscrasias; bone marrow depression; liver damage.

Warnings: Tardive dyskinesia (TD) may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively brief treatment at low doses. There is no known treatment for TD, although it may remit if peuroleptic cap with drawn. Neuroleptic treatment may suppress. doses. There is no known treatment for TD, although it may remit if neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. It signs and symptoms of TD appear, discontinuation of neuroleptics should be considered. [See PRECAUTIONS.]

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex, has been reported in association with antiposychotic drugs. Clinical manifestations include: Hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability.

The management of NMS should include I) immediate discontinua-tion of antipsychotic drugs and other drugs not essential to concur-rent therapy. 2) intensive symptomatic treatment and medical monitoring, and 3) treatment, if available, of any concomitant serious medical problems.

Sendos medical process. Stelazine: Concentrate contains sodium bisulfite, which may cause allergic-type reactions including anaphylactic symptoms or asthmatic episodes in certain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and probably low and is seen more frequently in asthmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive (e.g., have had blood dyscrasias, jaundice) to any phenothiazine. Caution patients about activities requiring alertness (e.g., operating vehicles or machinery), especially during the first few days' therapy. Additive depressant effect is possible with other C. N.S. depressants, including alcohol. Do not use in pregnancy except when essential and

potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuro-leptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is contemplated.

when chronic use is contemplated. Use cautiously in angina. Avoid high doses and parenteral use when cardiovascular system is impaired since hypotension has occurred. Antiemetic effect may mask the signs of overdosage of other drugs or obscure diagnosis and treatment of certain physical disorders. Prolonged use of high doses may result in cumulative effects with severe C. N. S. or vasomotor symptoms. If retinal changes occur discontinue drug. Agranulocytosis, thrombocytopenia, pancytopenia, anemia, cholestatic jaundice, liver damage have been reported. Use cautiously in patients with glaucoma.

glaucoma. Patients with a history of long-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent in vitro, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

cautiously in persons who will be exposed to extreme heat. Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenergic blockade. Concomtant use of phenothiazines with propranolol increases plasma leveis of both drugs. Concurrent use of phenothiazines and related compounds. Thiazide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytoin toxicity, dosage adjustments of anticonvulsants may be necessary. If neuro-muscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive 'Stelazine' 48 hours before or 24 hours after myelography with the contrast medium metrizamide. The presence of phenothiazines may produce false positive phenylketonuria (PKU) test results.

dry mouth, insomnia, amenorihea, fatigue, muscular weakness, danreason, burred vision. Neuromuscular (extrapyramidal) reactions: motor restlessness, dystonias, pseudo-parkinsonism, tardive dystonia.

Other adverse reactions reported with Stelazine (trifluoper-azine HCI, SK&F) or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

Grand mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities; altered cerebrospinal fluid proteins, cerebral edema; prolongation and intensification of the action of C.N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, constipation, obstipation, adynamic illeus, ejaculatory disorders/impotence, priapism, atonic colon, urinary retention, miosis and mydriasis; reactivation of psychotic processes, catatonic-like states, hypotension (sometimes fatal); cardiac arrest; leukopenia, eosinophilia, pan-cytopenia, agranulocytosis, thrombocytopenic purpura, hemolytic anemia, aplastic anemia, jaundice, biliary stasis, hyperglycemia, hypoglycemia, glycosuria, menstrual irregularities, galactornhea, gynecomastia, false positive pregnancy tests, photosensitivity, tiching, erythema, urticaria, eczema up to exfoliative dermattis, asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions, peripheral edema; reversed endema, anaphylactoid reactions, peripheral edema; reversed endema, anaphylactoid reactions, peripheral edema; reversed epinephrine effect, hyperpyrexia; mild fever after large I.M. doses; increased appetite; increased weight, a systemic lupus erythematosus-like syndrome; pigmentary retinopathy; with prolonged administration of substantial doses; skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits; neuroleptic malignant syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible Q and T wave distortions—have been observed. Temporary nausea, vomiting, dizziness, and tremulousness may follow abrupt cessation of high-dose therapy. NOTE: Sudden death in patients taking phenothiazines (apparently due to cardiac arrest or asphyxia due to failure of cough reflex) has been reported.

Supplied: Tablets, I. mg., 2 mg., 5 mg. and 10 mg., in bottles of 100 and 1

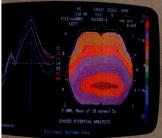
Supplied: Tablets, 1 mg., 2 mg., 5 mg. and 10 mg., in bottles of 100 and 1000; in Single Unit Packages of 100 (Intended for institutional use only): Injection, 2 mg./ml., and Concentrate, 10 mg./ml. BRS-SZ:L61

SK&F CO.

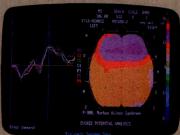
If you are going to be successful in topographic brain mapping, you need more than promises.

e want to explain why our responsible approach to topographic brain mapping is critical to your success.

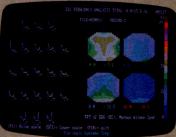
Anyone can make claims. We can demonstrate the system and kind of responsibility it takes to become the world leader in topographic brain mapping.



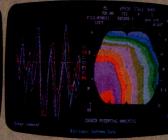
O mean of 10 normal subjects



P-300 of patient with Morbus Wilson Syndrome



FFT of EEG (EC), Morbus Wilson Syndrome



P-300 of patient with Alzheimer's Disease

Responsibility

If you want to acquire topographic brain mapping data that will be clinically accepted by your colleagues, you must have a system provided by a company with a proven reputation for responsibility. We will discuss the clinical applications with you which are supported by appropriate research and are available to assist you with diagnosis and treatment. We will talk to you honestly about the ways the BRAIN ATLAS® can assist you in monitoring psychotropic drugs and provide you valuable information in cases such as schizophrenia, dementia, depression, organic brain dysfunction and alzheimer's disease. At Bio-logic, we always remember that you are the Doctor with the responsibility for diagnosis of patients. Our responsibility is to provide quality systems which will assist you in that diagnosis.

Normative Data

Before we introduced the first Brain Atlas in April 1984, we had a program in place for the collection and screening of normative data. We will supply you with a quality normative data base which is continuously expanding in number of cases, types of tests and subgroups. Our unique program produces normative data which have been collected in multiple sites according to stringent protocols and anonymously scrutinized by an independent medical review board outside the company. We also provide you with the capability to create your own normative data base. At Bio-logic, our Normative Data Base is an open book. We will share the number of cases we have in each category and explain our data collection/data evaluation process in detail.

Ease of Use

The Brain Atlas will deliver the full power and flexibility of a computer. Powerful functions are reduced to a few keystrokes when you use the easy-to-follow menus and help screens to guide you to the level of sophistication you require in testing. Because the system is IBM PC/AT compatible, we can even incorporate commercially available programs to make your work faster and easier.

Affordable and Expandable

The Brain Atlas series offers you a complete range in price and capability with the BRAIN

ATLAS EEG MAPPER, BRAIN ATLAS I, BRAIN ATLAS II, BRAIN ATLAS III and the BRAIN ATLAS III PLUS. The BRAIN ATLAS III and th BRAIN ATLAS III PLUS are totally self contain systems and need not be interfaced to an EE machine. All the systems in the series have options available which allow you to tailor the system to fit your specific requirements and budget. Each system is designed to be upgraded as your needs change or as new capabilities are introduced.

Customer Support, Training and User Group

Bio-logic maintains and provides a complete program for unsurpassed customer support and training. Whether you are working with t customer support and applications staff members or attending our customer training cours and seminars, you will be interacting with professionals who are dedicated to your satis faction. The unique user group which is supported by Bio-logic allows you the opportunit to exchange information with your colleagues worldwide who are dedicated to quality topographic brain mapping.

Bio-logic® Systems Corp.

Corporate HeadquartersOne Bio-logic Plaza
Mundelein, IL 60060

Call toll free at 800-323-8326 (Illinois call collect 312-949-5200) Telex: 650-1733095 MCI FAX: (312) 949-8615

Europe/Middle East

Dickenson House, Albion Street, Chipping Norton, Oxfordshire, UK 0X7 5BJ Telephone 44 608 41 981 Telex: Ref. EEG001, 265871 MONREF G FAX: 44 608 41887



THE AMERICAN JOURNAL OF PSYCHIATRY

EDITOR John C. Nemiah, M.D.

DEPUTY EDITOR Morris A. Lipton, Ph.D., M.D.

BOOK FORUM EDITOR Nancy C. Andreasen, M.D., Ph.D.

EDITORIAL STAFF

Managing Editor Melanie Miller

Assistant Managing Editor Linda A. Loy

Senior Assistant Editors Marianne K. Guerra Laura M. Little Jane Weaver

Assistant Editors Marjorie M. Henry Beverly M. Sullivan

Administrative Assistant Pamela Rich

Editorial Secretaries Donna A. Coleman Barbara J. LeMoine

Art Services John P. Halford

ASSOCIATE EDITORS

Ross I. Baldessarini, M.D. Elissa P. Benedek, M.D. Philip A. Berger, M.D. Jonathan F. Borus, M.D. Kenneth L. Davis, M.D. Lewis L. Judd, M.D. Toksoz Byram Karasu, M.D. Herbert Y. Meltzer, M.D. Judith L. Rapoport, M.D. Loren H. Roth, M.D., M.P.H. Lorraine D. Siggins, M.D. Charles E. Wells, M.D.

STATISTICAL EDITORS John J. Bartko, Ph.D. Lee Gurel, Ph.D.

Charles B. Wilkinson, M.D.

FORMER EDITORS

Amariah Brigham, M.D. 1844-1849 T. Romevn Beck, M.D. 1849-1854 John P. Gray, M.D. 1854-1886

G. Alder Blumer, M.D. 1886-1894

Richard Dewey, M.D. 1894-1897

Henry M. Hurd, M.D. 1897-1904

Edward N. Brush, M.D. 1904-1931

Clarence B. Farrar, M.L. 1931-1965

Francis I. Braceland, M.I. 1965-1978

The American Journal of Psychiatry, ISSN 0002-953X, is published monthly by the American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005. Subscriptions: U.S. \$50.00 per year, Canada and foreign \$65.00; single issues: U.S. \$7.00, Canada and foreign \$8.00.

Canada and foreign \$8.00.

Business communications, changes of address, and questions about subscriptions from APA members should be directed to the Division of Member Services: (202) 682-6090. Communications from nonmember subscribers should be directed to the Circulation Department: (202) 682-6158. Authors who wish to contact the Journal editorial office should call (202) 682-6020.

Business Management: Nancy Frey, Director, Periodicals Services; Laura G. Abedi, Advertising Production Manager: (202) 682-6154; Beth Prester, Director, Circulation; Karen Loper, Promotion Manager; Jackie Coleman, Fulfillment Manager.

Advertising Sales: Raymond J. Purkis, 2444 Morris Avenue, Union, NJ 07083; (201) 964-3100.

Type set by Byrd PrePress, 5408 Port Royal Road, Springfield, VA 22151. Printed by Dartmouth Printing Company, 69 Lyme Road, Hanover, NH 03755.

Second-class postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to Circulation Department, American Psychiatric Association, 1400 K Street, NH NY Action 2002.

tion Department, American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005.

Indexed in Abstracts for Social Workers, Biological Abstract Chemical Abstracts, Chicago Psychoanalytic Literature Index, C mulative Index to Nursing Literature, Excerpta Medica, Hospi Literature Index, Index Medicus, International Nursing Index Nutrition Abstracts, Psychological Abstracts, Science Citation Index and Social Sciences Index.

dex, and Social Sciences Index.

The American Psychiatric Association does not hold itself responsible for statements made in its publications by contributors advertisers. Unless so stated, material in the Journal does not refle the endorsement, official attitude, or position of the Americ Psychiatric Association or of the *Journal's* Editorial Board.

Authorization to photocopy items for internal or personal use, the internal or personal use of specific clients, is granted by APA libraries and other users registered with the Copyright Clearar Center (CCC) Transactional Reporting Service, provided that 1 base fee of \$00.75 per copy is paid directly to CCC, 21 Congress Salem, MA 01970. 0002-953X/87/\$00.75.

This consent does not extend to other kinds of copying, such copying for general distribution, for advertising or promotion.

copying for general distribution, for advertising or promotion purposes, for creating new collective works, or for resale. APA do not require that permission be obtained for the photocopying fees associated with such permission are waived.

Copyright © 1987 American Psychiatric Association.

THE AMERICAN JOURNAL OF PSYCHIATRY

Volume 144, Number 10 October 1987 SPECIAL ARTICLES 1253 The Dexamethasone Suppression Test: An Overview of Its Current Status The APA Task Force on Laboratory Tests in Psychiatry in Psychiatry Clinical Implications of Adult Developmental Theory 1263 Calvin A. Colarusso and Robert A. Nemiroff **REGULAR ARTICLES** 1271 Familial Schizophrenia and Treatment Response Jeremy M. Silverman, Richard C. Mohs, Michael Davidson, Miklos F. Losonczy, Richard S.E. Keefe, John C.S. Breitner, Judith E. Sorokin, and Kenneth L. Davis A Relationship Between Anatomical and Physiological Brain Pathology in Schizophrenia: Lateral Cerebral Ventricular Size Predicts Cortical Blood Karen Faith Berman, Daniel R. Weinberger, Richard C. Shelton, and Ronald F. Zec A Controlled Study of Lifetime Prevalence of Affective and Other Psychiatric Disorders in Bulimic Outpatients James I. Hudson, Harrison G. Pope, Jr., Deborah Yurgelun-Todd, Jeffrey M. Jonas, and Frances R. Frankenburg Creativity and Mental Illness: Prevalence Rates in Writers and Their First-1288 Degree Relatives Nancy C. Andreasen **COMMENTARY** 1293 Effects of the New Economic Climate on Psychotherapeutic Practice Paul Chodoff **EDITORIAL** 1298 Mental Illness Awareness Week Paul J. Fink Morning Versus Midday Phototherapy of Seasonal Affective Disorder **BRIEF** COMMUNICATIONS Frederick M. Jacobsen, Thomas A. Wehr, Robert A. Skwerer, David A. Sack, and Norman E. Rosenthal Sustained Remission in Drug-Free Schizophrenic Patients Wayne S. Fenton and Thomas H. McGlashan Psychiatric Complications of Disulfiram Treatment Laure Branchey, William Davis, Kelvin K. Lee, and Richard K. Fuller CSF Somatostatin in Patients With Alzheimer's Disease, Older Depressed 1313 Patients, and Age-Matched Control Subjects Trey Sunderland, David R. Rubinow, Pierre N. Tariot, Robert M. Cohen, Paul A. Newhouse, Alan M. Mellow, Edward A. Mueller, and Dennis L. Murphy A Laboratory Procedure for the Induction of Flashbacks Rainey, Jr., Asaf Aleem, Aurelio Ortiz, Vikram Yeragani, Robert Pohl, and Richard Berchou The Hypothalamic-Pituitary-Adrenal System in Panic Disorder 1320 Goldstein, Uriel Halbreich, Gregory Asnis, Jean Endicott, and Jose Alvir

> Idiopathic Cardiomyopathy and Panic Disorder: Clinical Association in Cardiac Transplant Candidates Jeffrey P. Kahn, Ronald E. Drusin, and Donald F. Klein

Cyclic AMP Signal Transduction in Posttraumatic Stress Disorder

Bernard Lerer, Richard P. Ebstein, Miguel Shestatsky, Zecharia Shemesh,

1324

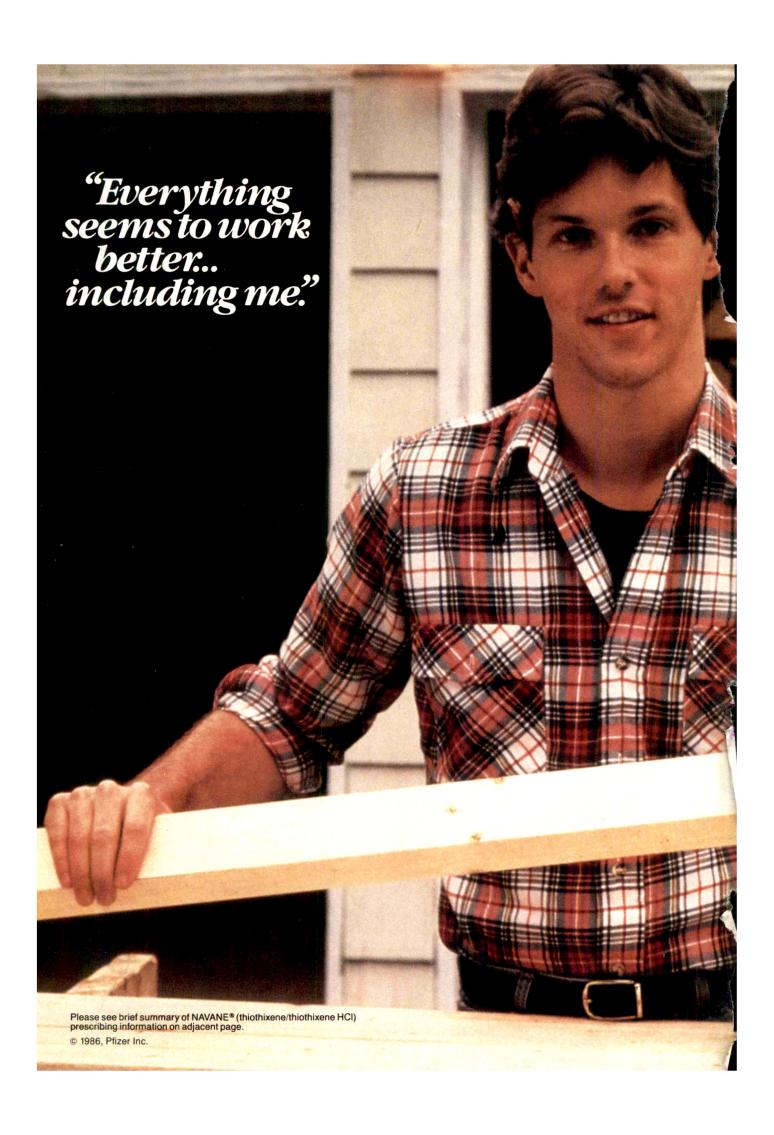
and David Greenberg

	1331	Views of Practicing Psychiatrists on the Treatment of Anxiety a d Somatoform Disorders Gavin Andrews, Dusan Hadzi-Pavleve, Helen Christensen, and Richard Mattick
CLINICAL AND RESEARCH REPORTS	1335	Abnormal Prolactin Response to Haloperidol Challenge in Men With Schizophrenia Nicholas A. Keks, David L. Copolov, and Bru & S. Single
	1337	Outpatient Group Therapy for Schizophrenic Substance Abusers Da. id J. Hellerstein and Beth Meehan
	1340	Antipsychotic Effect of Buprenorphine in Schizophrenia Clau .a Schmauss, Alexander Yassouridis, and Hinderk M. Emrich
	1342	Symptomatic HIV Infection of the CNS in a Patient Without Classical Evidence of Immune Deficiency Alexandra Beckett, Paul Sura Lergral, Theo Manschreck, Halyna Vitagliano, Mary Henderson, M. Lyn. Buttolph, and Michael Jenike
	1344	Frequency and Presentation of Neuroleptic Malignant Syndrome A Prospective Study Paul E. Keck, Jr., Harrison G. Pope, Jr., an . Susan L. McElroy
	1347	Bowel Obsessions Responsive to Tricyclic Antidepressants in Fou Paties to Michael A. Jenike, Halyna L. Vitagliano, Joseph Rabinowitz, Do ald C. Goff, and Lee Baer
	1349	Inadequate Plasma Concentrations in Some High-Dose Methadore Maintenance Patients Forest S. Tennant, Jr.
BOOK FORUM	1351	
LETTERS TO THE EDITOR	1362	
OFFICIAL ACTIONS	1381	Report of the Secretary: Summary of Actions of the Board of Trunees,
	1388	May 1986–May 1987 Report of the Treasurer
	1390 1393	Report of the Medical Director Report of the Speaker
	1397	Report of the Speaker-Elect
	1398 1399	Report of the Committee on Constitution and By-Laws Report of the Committee on Membership
	1402	Report of the Committee of Tellers
OTHER	A16	Calendar
	A40 A50	Officers of the American Psychiatric Association Information for Contributors
	A57	British Journal of Psychiatry Contents
	A64	Index to Advertisers

New Statistical Peer Review Policy

The Editor is pleased to announce the appointment of John J. Bartko, Ph.D., and Lee Gurel, Ph.D., as Statistical Editors of the *American Journal of Psychiatry*.

Effective September 1, 1987, manuscripts submitted to the *Journal* for consideration for publication will, at the direction of the Statistical Editors, receive peer review for statistical content *in addition to* the *Journal*'s regular peer review.





Navane

(thiothixene) (thiothixene HCI)

It feels good to feel useful again

References: 1. Bressler B, Friedel RO: A comparison between chlorpromazine and thiothixene in a Veterans Administration hospital population. *Psychosomatics* 1971;12:275-277. 2. DiMascio A, Demirgian E: Study of the activating properties of thiothixene. *Psychosomatics* 1972;13:105-108. 3. DiMascio A, Demirgian E: Job training in the rehabilitation of the chronic schizophrenic. Presented as a Scientific Exhibit at The American Psychiatric Association. Washington, DC, May 3-6, 1971. 4. Goldstein B, Weiner D, Banas F: Clinical evaluation of thiothixene in chronic ambulatory schizophrenic patients, in Lehmann HE, Ban TA (eds): *The Thioxanthenes: Modern Problems of Pharmacopsychiatry*. Basel, Switzerland, S. Karger, 1969, vol 2, pp. 45-52. 5. Dillenkoffer RL, Gallant DM, George RB, et al: Electrocardiographic evaluation of schizophrenic patients: A double-blind comparison. Presented as a Scientific Exhibit at The 125th Annual Meeting of the American Psychiatric Association, Dallas, May 1-4, 1972. 6. Data available on request from Roerig.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
Navane* (thiothixene) Capsules: 1 mg, 2 mg, 5 mg, 10 mg, 20 mg
(thiothixene hydrochloride) Concentrate: 5 mg/ml, Intramuscular: 2 mg/ml, 5 mg/ml
Indications: Navane is effective in the management of manifestations of psychotic disorders. Navane has
not been evaluated in the management of behavioral complications in patients with mental retardation.
Contraindications: Contraindicated in patients with circulatory collapse, comatose states, central nervous
system depression due to any cause, and blood dyscrasias. Contraindicated in individuals who have shown
hypersensitivity to the drug. It is not known whether there is a cross-sensitivity between the thioxanthenes
and the phenothiazine derivatives, but the possibility should be considered.
Warnings: Tardive Dyskinesia—Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs.
Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women,
it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which
patients are likely to develop the syndrome whether neuroleptic drug products differ in their potential to
cause tardive dyskinesia is unknown.
Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed
to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to
the patient increase. However, the syndrome can develop, although much less commonly, after relatively
brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome may
remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, itself, however,
may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly
mask the underlying

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the

It signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

For further information about the description of tardive dyskinesia and its clinical detection, please refer to Information for Patients in the Precautions section, and to the Adverse Reactions section.)

Neuroleptic Malignant Syndrome (NMS)—A potentially tatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially tatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially tatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially tatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potential symptom complexed. In arriving at a diagnost cevaluation of patients with this syndrome is complicated. In arriving at a diagnost, it is important to identify cases where the clinical presentation includes both serious medical illness (e.g., pneumonia, systemic infection, etc.) and untreated or inadequately treated extrapyramidal signs and symptoms (EPS). Other important considerations in the differential diagnosis include central anticholinergic toxicity, heat stroke, drug fever and primary central nervous system (CNS) pathology.

The management of NMS should include 1) immediate discontinuation of antipsychotic drugs and other drugs not essential to concurrent therapy, 2) intensive symptomatic treatment and medical monitoring, and 3) treatment of any concomitant serious medical problems for which specific treatments are available. There is no general agreement about specific pharmacological treatment regimens for uncomplicated NMS. If a patient requires antipsychotic drug treatment after recovery from NMS, the potential reintroduction drug therapy should be carefully considered. The patient should be carefully monitored, since recurrences of NMS have been reported.

Usage

Caution as well as careful adjustment of the dosage is indicated when Navane is used in conjunction with other CNS depressants other than anticionorulisant drugs.

Though exhibiting rather weak anticholinergic properties, Navane should be used with caution in patients who are known or suspected to have glaucoma, or who might be exposed to extreme heat, or who are receiving atropine or related drugs.

Use with caution in patients with cardiovascular disease.

Also, careful observation should be made for pigmentary retinopathy, and lenticular pigmentation (fine lenticular pigmentation has been noted in a small number of patients treated with Navane for prolonged



2 mg/ml 5 mg/ml

periods). Blood dyscrasias (agranulocytosis, pancytopenia, thrombocytopenic purp (jaundice, biliary stasis) have been reported with related drugs.

Undue exposure to sunlight should be avoided. Photosensitive reactions have be on Navane (thiothixene).

on Navane (thiothixene).

Intramuscular Administration—As with all intramuscular preparations, Navane In injected well within the body of a relatively large muscle. The preferred sites are the of the buttock (i.e. gluteus maximus) and the mid-lateral thigh.

The deltoid area should be used only if well developed, such as in certain adults atten only with caution to avoid radial nerve injury. Intramuscular injections should lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiratic avoid inadvertent injection into a blood vessel.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic is culture experiments indicate that approximately one third of human breast cancers a in vitro, a factor of potential importance if the prescription of these drugs is contemp a previously detected breast cancer. Although disturbances such as galactorrhea, mastia, and impotence have been reported, the clinical significance of elevated se unknown for most patients. An increase in mammary neoplasms has been found ir administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studio however, have shown an association between chronic administration of these drugs igenesis; the available evidence is considered too limited to be conclusive at this time.

indevert, have snown an association between chronic administration of these drugs igenesis; the available evidence is considered too limited to be conclusive at this tim *Information for Patients*—Given the likelihood that some patients exposed chronic; develop tardive dyskinesia, it is advised that all patients in whom chronic use is con possible, full information about this risk. The decision to inform patients and/or the viously take into account the clinical circumstances and the competency of the patinformation provided.

Adverse Reactions: Note: Not all of the following adverse reactions have been reflicted that the patients and the competency of the patinformation provided.

(thiothixene). However, since Navane has certain chemical and pharmacologic simila azines, all of the known side effects and toxicity associated with phenothiazine thera

azines, all of the known side effects and toxicity associated with phenothiazine thera mind when Navane is used.

Cardiovascular effects: Tachycardia, hypotension, lightheadedness, and syncope sion occurs, epinephrine should not be used as a pressor agent since a paradoxical fur pressure may result. Nonspecific EKG changes have been observed in some patic (thiothixene). These changes are usually reversible and frequently disappear on cont The incidence of these changes is lower than that observed with some phenothiazine cance of these changes is not known.

CNS effects: Drowsiness, usually mild, may occur although it usually subsides Navane therapy. The incidence of sedation appears similar to that of the piperazine grobut less than that of certain aliphatic phenothiazines. Restlessness, agitation and inso with Navane. Seizures and paradoxical exacerbation of psychotic symptoms have of infrequently.

Hyperreflexia has been reported in infants delivered from mothers having receive

drugs.
In addition, phenothiazine derivatives have been associated with cerebral edema a

Extrapyramidal symptoms, such as pseudo-parkinsonism, akathisia, and dystonic

abnormalities.

Extrapyramidal symptoms, such as pseudo-parkinsonism, akathisia, and dystoni. Management of these extrapyramidal symptoms depends upon the type and severity symptoms may require the use of an injectable antiparkinson agent. More slowly eme to managed by reducing the dosage of Navane and/or administering an oral antipark Persistent Tardive Dyskinesia: As with all antipsychotic agents tardive dyskinesia patients on long-term therapy or may occur after drug therapy has been discontinucharacterized by rhythmical involuntary movements of the tongue, face, mouth or jai tongue, putfing of cheeks, puckering of mouth, chewing movements). Sometimes i panied by involuntary movements of extremities. Since early detection of tardive dyskinesia is important, patients should be monitor iss. It has been reported that fine vermicular movement of the tongue may be an early if this or any other presentation of the syndrome is observed, the clinician should continuation of neuroleptic medication. (See Warnings section.)

Hepatic Effects: Elevations of serum transaminase and alkaline phosphatase, us been infrequently observed in some patients. No clinically confirmed cases of jau Navane have been reported.

Hematologic Effects: As is true with certain other psychotropic drugs, leukoper which are usually transient, can occur occasionally with Navane. Other antipsychotic sociated with agranulocytosis, essinophilia, hemolytic aemia, thrombocytopenia ar Allergic Reactions: Rash, pruritus, urticaria, photosensitivity and rare cases of a reported with Navane. Undue exposure to sunlight should be avoided. Although r Navane, exfoliative dermatitis and contact dermatitis (in nursing personnel) have been phenothiazines.

phenothiazines.
Endocrine Disorders: Lactation, moderate breast enlargement and amenorrhea have percentage of females receiving Navane. If persistent, this may necessitate a reduc discontinuation of therapy. Phenothiazines have been associated with false positive necomastia, hypoglycemia, hyperglycemia, and glycosuria.
Autonomic Effects: Dry mouth, blurred vision, nasal congestion, constipation, inc creased salivation, and impotence have occurred infrequently with Navane therapy. been associated with miosis, mydriasis, and adynamic ileus.

Other Adverse Reactions: Hyperpyrexia, anorexia, nausea, vomiting, diarrhea, inc weight, weakness or fatigue, polydipsia and peripheral edema.

Although not reported with Mavane, evidence indicates there is a relationship be therapy and the occurrence of a systemic lupus erythematosus-like syndrome. Neuroleptic Malignant Syndrome (NMS): Please refer to the lext regarding NM section.

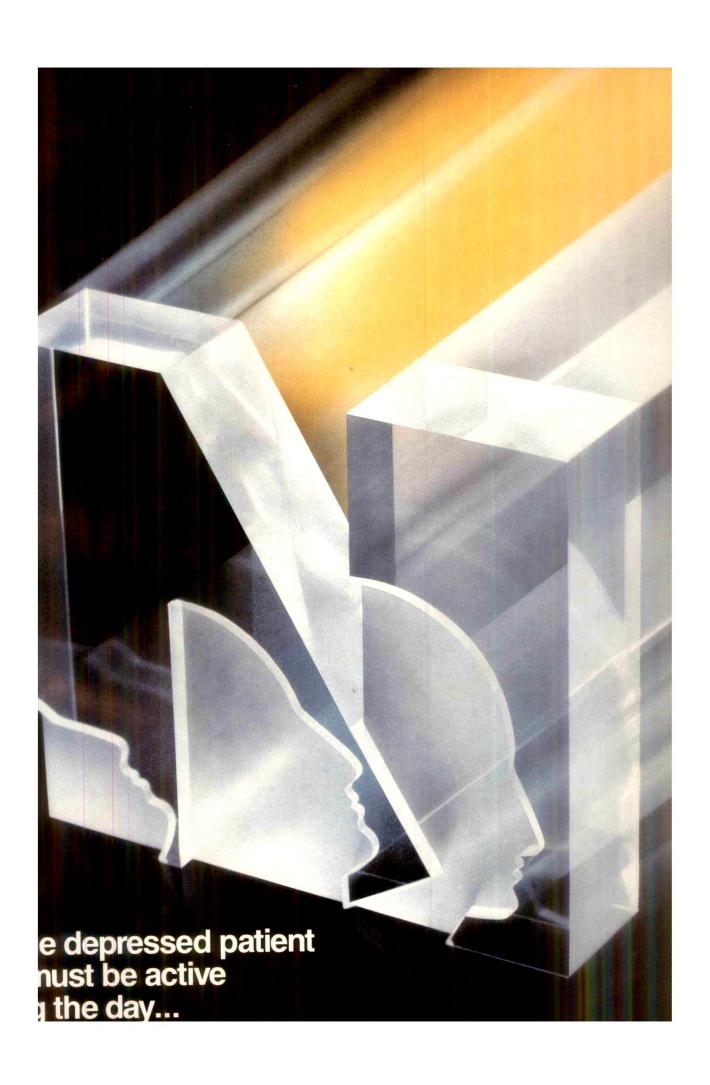
NOTE: Sudden deaths have occasionally been reported in patients who have received azine derivatives. In some cases the cause of death was apparently cardiac arrest or as of the cough reflex. In others, the cause could not be determined nor could it be estab due to phenothiazine administration.

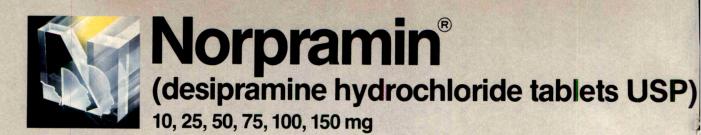
Dosage: Dosage of Navane should be individually adjusted depending on the chronici condition. See full prescribing information.

Overdosage: For information on signs and symptoms, and treatment of overdosage information.

ROERIG *Pfizer*

New York, New York 10017





The fastest growing antidepressant in the U.S.A.

Now after 20 years, the antidepressant most widely prescribed by psychiatrists

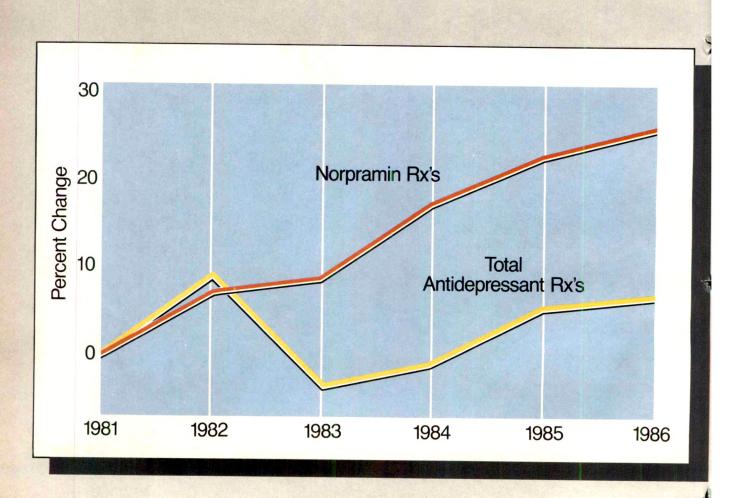


Figure 1.

The red line tracks the percent change in Norpramin prescriptions; the yellow line represents the percent change in total prescription activity for the antidepressant market (results of nationwide independent survey).

Merrell Dow

When a precise dosage titration and the added flexibility of once daily, single tablet dosing are desirable

"...selection of pharmacological agents that can be prescribed once or twice a day will improve patient compliance." 1

Norpramin al	lows you	to choose	
This	or	This	
25 mg tid 💮 💮 💮		75 mg qd 🔴	
25 mg qid 🕠 🕚 🕚		100 mg qd	
50 mg tid 💿 💿 💿		150 mg qd	

the fastest growing antidepressant in the U.S.A.

 a 20-year record of efficacy in relieving the symptoms of depression

a clinical profile well defined over time

 the choice of a once or twice daily single tablet dosage, and the added flexibility of six different dosage strengths

^{1.} Greenberg RN: Overview of patient compliance with medication dosing: A literature review. Clin Ther 6:592-599, 1984. Brief Summary of Prescribing Information appears on the next page.



Norpr min

(desipramine hydrochloride tablets USP)

10, 25, 50, 75, 100, 150 mg

Dosage Flexibility

Convenient choice of six tablet strengths and once daily or divided dosage schedule allows titration to individual response.



10 mg



25 ma



50 mg



75 mg



100 ma



150 ma

The antidepressant most widely prescribed by psychiatrists

Norpramin[®]

(desipramine hydrochloride tablets USP)

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

Brief Summary

MECHANISM OF ACTION: Available evidence suggests that many depressions have a biochemical basis in the form of a relative deficiency of neurotransmitters such as norepinephrine and serotonin. Norepinephrine deficiency may be associated with relatively low urinary 3-methoxy-4-hydroxyphenyl glycol (MHPG) levels, while serotonin deficiencies may be associated with low spinal fluid levels of 5-hydroxyindolacetic acid.

While the precise mechanism of action of the tricyclic anti-depressants is unknown, a leading theory suggests that they restore normal levels of neurotransmitters by blocking the reuptake of these substances from the synapse in the central nervous system.

bridge of these substances from the synapse in the central ner-vous system.

Evidence indicates that the secondary amine tricyclic anti-depressants, including Norpramin, may have greater activity in blocking the re-uptake of norepinephrine. Tertiary amine tricyclic antidepressants, such as amitriptyline, may have greater effect on synapsis.

depressants, including Norpramin, may have greater activity in blocking the re-uptake of norepinephrine. Tertiary amine tricyclic antidepressants, such as amitriptyline, may have greater effect on serotonin re-uptake.

Norpramin (desipramine hydrochloride) is not a monoamine oxidase (MAQ) inhibitor and does not act primarily as a central nervous system stimulant. It has been found in some studies to have a more rapid onset of action than imipramine. Earliest therapeutic effects may occasionally be seen in 2 to 5 days, but full treatment benefit usually requires 2 to 3 weeks to obtain. INDICATIONS: Norpramin (desipramine hydrochloride) is indicated for relief of symptoms in various depressive syndromes, especially endogenous depression.

CONTRAINDICATIONS: Desipramine hydrochloride should not be given in conjunction with, or within 2 weeks of, treatment with an MAQ inhibitor drug; hyperpyretic crises, severe convulsions, and death have occurred in patients taking MAQ inhibitors and tricyclic antidepressants. When Norpramin (desipramine hydrochloride) is substituted for an MAQ inhibitor, at least 2 weeks should elapse between treatments. Norpramin should then be started cautiously and should be increased gradually.

The drug is contraindicated in the acute recovery period following myocardial infarction. It should not be used in those who have shown prior hypersensitivity to the drug. Cross sensitivity between this and other dibenzazepines is a possibility. WARNINGS: 1. Extreme caution should be used when this drug is given in the following situations: a. In patients with cardiovascular disease, because of the possibility of conduction defects, arrhythmias, tachycardias, strokes, and acute myocardial infarction. b. In patients with a history of urinary retention or glaucoma, because of the possibility of cardiovascular toxicity, including arrhythmias, dachycardias, strokes, and acute myocardial infarction. because of the possibility of cardiovascular toxicity, including arrhythmias, dachycardias, strokes, and acu

overdosage.

PRECAUTIONS: 1. It is important that this drug be dispensed in the least possible quantities to depressed outpatients, since sui-

cide has been accomplished with this class of drug. Ordinary prudence requires that children not have access to this drug or to potent drugs of any kind; if possible, this drug should be dispensed in containers with child-resistant safety closures. Storage of this drug in the home must be supervised responsibly. 2. If serious adverse effects occur, dosage should be reduced or treatment should be altered. 3. Norpramin (desipramine hydrochloride) therapy in patients with manic-depressive illness may induce a hypomanic state after the depressive phase terminates.

4. The drug may cause exacerbation of psychosis in schizophrenic patients. 5. Close supervision and careful adjustment of dosage are required when this drug is given concomitantly with anti-cholinergic or sympathomimetic drugs. 6. Patients should be warned that while taking this drug their response to alcoholic beverages may be exaggerated. 7. Clinical experience in the concurrent administration of ECT and antidepressant drugs is limited. Thus, if such treatment is essential, the possibility of increased risk relative to benefits should be considered. 8. If Norpramin (desipramine hydrochloride) is to be combined with other psychotropic agents such as tranquilizers or sedative/hyponotics, careful consideration should be given to the pharmacology of the agents employed since the sedative effects of Norpramin and benzodiazepines (e.g., chlordiazepoxide or diazepam) are additive. Both the sedative and anticholinergic effects of the major tranquilizers are also additive to those of Norpramin. 9. This drug should be discontinued as soon as possible prior to elective surgery because of the possible cardiovascular effects. Hypertensive episodes have been observed during surgery in patients taking designamine hydrochloride. 10. Both elevation and lowering of blood sugar levels have been reported. 11. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is e

also nave aspirin hypersensitivity.

ADVERSE REACTIONS: Note: Included in the following listing are a few adverse reactions that have not been reported with this specific drug. However, the pharmacologic similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when Norpramin (designamine hydrochloride) is

giveri.

Gardiovascular, hypotension, hypertension, tachycardia, palpitation, arrhythmias, heart block, myocardial infarction, stroke.

Psychiatric, confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of nsychosis.

lucinations, disprientation, delusions; anxiety, restlessness, agi-tation; insomnia and nightmares; hypomania; exacerbation of psychosis. Neurologic: numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extra-pyramidal symptoms; seizures; alteration in EEG patterns; linnitius

tinnitus.

Anticholinergic: dry mouth, and rarely associated sublingual adentitis: blurred vision, disturbance of accommodation, mydriasis, increased intraocular pressure; constipation, paralytic ileus; urnary retention, delayed micturition, dilatation of urinary tract.

Allergic: skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight), edema (of face and tongue or general), drug fever, cross sensitivity with other tricyclic drugs, Hematologic: bone marrow depressions including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: anorexia, nausea and vomiting, epigastric distress, peculiar taste, abdominal cramps, diarrhea, stomatitis, black tongue.

Endocrine: gynecomastia in the male, breast enlargement and galactorrhea in the female; increased or decreased libido, impotence, testicular swelling; elevation or depression of blood sugar

Other: jaundice (simulating obstructive), altered liver function; weight gain or loss; perspiration, flushing; urinary frequency, nocturia; parolid swelling; drowsiness, dizziness, weakness and fatigue, headache; alopecia

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nau-

cessation of freatment after prolonged therapy may produce nau-sea, headache, and malaise.

DOSAGE AND ADMINISTRATION: Not recommended for use in children. Lower dosages are recommended for elderly patients and adolescents. Lower desages are also recommended for out-patients compared to hospitalized patients, who are closely super-vised. Dosage should be initiated at a low level and increased according to clinical response and any evidence of intolerance. Following remission, maintenance medication may be required for a period of time and should be at the lowest dose that will maintain remission.

a period of time and should be at the lowest dose that will maintain remission.

<u>Usual Adult Dose:</u> The usual adult dose is 100 to 200 mg per day. In more severely ill patients, dosage may be further increased gradually to 300 mg/day if necessary. Dosages above 300 mg/day are not recommended.

Dosage should be initiated at a lower level and increased according to tolerance and clinical response.

Treatment of patients requiring as much as 300 mg should generally be initiated in hospitals, where regular visits by the physician, skilled nursing care, and frequent electrocardiograms (ECG's) are available.

The best available evidence of impending toxicity from very high doses of Norpramin is prolongation of the ORS or QT intervals on the ECG. Prolongation of the PR interval is also significant, but less closely correlated with plasma levels. Clinical symptoms of intolerance, especially drowsiness, dizziness, and postural hyponension, should also alert the physician to the need for reduction in dosage. Plasma desipramine measurement would constitute the optimal guide to dosage monitoring.

Initial therapy may be administered in divided doses or a single daily dose.

Maintenance therapy may be given on a once-daily schedule for

Initial therapy may be administered in divided doses. Maintenance therapy may be given on a once-daily schedule for patient convenience and compliance.

Adolescent and Geriatric Dose: The usual adolescent and geriatric dose is 25 to 100 mg daily.

Dosage should be initiated at a lower level and increased according to tolerance and clinical response to a usual maximum of 100 mg daily. In more severely iil patients, dosage may be further increased to 150 mg/day. Doses above 150 mg/day are not recommended in these age groups.

Initial therapy may be administered in divided doses or a single daily dose.

Maintenance therapy may be given on a once-daily schedule for patient convenience and compliance.

OVERDOSAGE: See prescribing information for a discussion of symptoms and treatment of overdose.

Product Information as of January, 1985.

MERRELL DOW PHARMACEUTICALS INC. Subsidiary of The Dow Chemical Company Cincinnati, Ohio 45215, U.S.A.

Merrell Dow

DEPRESSION

The Answer May Be On The Tip Of Your Tongue

PDLA Proudly Introduces CORTITEST™

The Saliva Depression Test

Is it depression or a medical disorder? PDLA's Saliva Depression Test* can help you make the determination.

The Dexamethasone Suppression Test (DST) is a widely applied laboratory determination used as a state marker for endogenous depression and objective predictor of treatment response. The test requires at least two post-dexamethasone blood draws for cortisol analysis. PDLA's Saliva Depression Test eliminates the need to draw blood samples.

- Save time and money
- Convenient sample collection
- Significant result interpretation
- Excellent correlation
- Children or adolescents
- Difficult patients

For additional information, please return the coupon below or telephone: 1-800-237-PDLA.



* Contact PDLA for clinical references regarding measuring saliva in cortisol.

Name		
Title	Hospital	
Address		
City	State	Zip

American Psychiatric Press

Cordially Invites You to Become a Subscriber to the New Psychosomatics

Beginning quarterly publication in 1988, Psychosomatics, the journal of the Academy of Psychosomatic Medicine, will assume its rightful place in the journal community as a subscription-based, peer-reviewed

Highlights of the new Psychosomatics:

- Peer-reviewed, in-depth feature articles on timely subjects in medical psychiatry
- Peer-reviewed, special review articles on topics essential to clinical practice
- Expanded case reports section
- Comprehensive calendar of upcoming events
- New, easy-to-read format

SPECIAL OFFER:

Reserve your subscription now and save more than 15% on the regular subscription price.



MAIL TO: Psychosomatics, American Psychiatric Press, Inc. 1400 K Street, N.W., Washington, D.C. 20005

YES! Please enter my one-year subscription (4 issues) to the street of the street

- YES! Please enter my one-year subscription (4 issues) to the new **Psychosomatics**. My payment choice is indicated below:
- □ Enclosed is my check in the amount of \$59 (15% off the regular subscription price of \$70), made payable to American Psychiatric Press, Inc.
- Bill me \$59.
- ☐ Charge \$59 to my
- MasterCard
- Visa
- American Express

Account Number

Expiration Date

Signatur

Subscription price is \$72 outside the U.S.

Name

Address

City

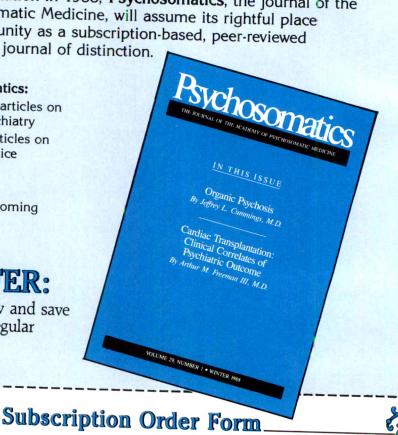
State _____

__ Zip ____

The first issue of your new subscription will be mailed in January 1988.

S70CG1







BECAUSE ONLY VALIUM













IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM







IS ALWAYS VALIUM















IS ALWAYS VALIUM







IS ALWAYS VALIUM











REMEMBER TO WRITE "DO NOT SUBSTITUTE."
IT PROTECTS YOUR DECISION.

Calendar

For free listing of your organization's official annual or regional meeting, please send us the following information: sponsor, location, inclusive dates, type and number of continuing education credits (if available), and the name, address, and telephone number of the person or group to contact for more information. All notices and changes must be received no later than 120 days before the first day of the month of desired publication and should be addressed to Calendar, American Journal of Psychiatry, 1400 K St., N.W., Washington, DC 20005. Because of space limitations, only listings of meetings of the greatest interest to Journal readers will be included.

DECEMBER

December 3-4, First National Fragile X Conference, Fragile X Foundation, Denver. Contact Fragile X Conference, c/o Expectations Unlimited, 6897 Paiute Ave., #2, Longmont, CO 80501; 303-652-2727.

December 4–5, annual meeting, Association for Research in Nervous and Mental Disease, Inc., New York. Contact Bernard Cohen, M.D., Executive Director, Mt. Sinai School of Medicine, 1 Gustave Levy Pl., Rm. 21-74, New York, NY 10029; 212-348-8133.

December 4–6, Fifth Biennial National Training Institute, National Center for Clinical Infant Programs, Washington, D.C. Contact Eileen Powell, Conference Coordinator, NCCIP, 733 15th St., N.W., Suite 912, Washington, DC 20005; 202-347-0308.

December 6–9, interim meeting, American Medical Association, Atlanta. Contact James H. Sammons, M.D., Executive Vice-President, 535 N. Dearborn St., Chicago, IL 60610; 312-645-5000.

December 12–20, fall meeting, American Psychoanalytic Association, New York. Contact Helen Fischer, Administrative Director, 309 East 49th St., New York, NY 10017; 212-752-0450.

JANUARY

January 17–20, annual meeting, American Council on Education, Washington, D.C. Contact Robert H. Atwell, President, One Dupont Circle, N.W., Suite 801, Washington, DC 20036; 202-939-9300.

January 17–23, annual meeting, Southern Clinical Neurological Society, Ft. Myers, Fla. Contact Millie F. Walden, Executive Secretary, 3425 S.W. 2nd Ave., #153, Gainesville, FL 32607; 904-374-6058, 904-373-9765.

January 24–27, annual meeting, National Association of Private Psychiatric Hospitals, Phoenix, Ariz. Contact NAPPH Department of Communications, 1319 F St., N.W., #1000, Washington, DC 20004; 202-393-6700.

FEBRUARY

February 4-6, Third International Conference on Monoclonal Antibody Immunoconjugates for Cancer, San Diego.

Contact Office of CME, M-017, UC San Diego School of Medicine, La Jolla, CA 92093; 619-534-3940.

February 8–12, annual meeting, American Group Psychotherapy Association, New York. Contact Marsha S. Block, Chief Executive Officer, 25 East 21st St., 6th Fl., New York, NY 10010; 212-477-2677.

February 11–16, annual meeting, American Association for the Advancement of Science, Boston. Contact Alvin W. Trivelpiece, Executive Officer, 1333 H St., N.W., Washington, DC 20005; 202-326-6400.

February 12–15, annual meeting, American Association for Geriatric Psychiatry, Los Angeles. Contact Charles A. Shamoian, M.D., President, P.O. Box 376A, Greenbelt, MD 20770; 301-220-0952.

February 17–21, annual meeting, American College of Psychiatrists, Tucson, Ariz. Contact Alice Conde Martinez, Executive Director, P.O. Box 365, Greenbelt, MD 20770; 301-345-3534.

MARCH

March 3-5, annual meeting, American Psychopathological Association, New York. Contact Lee Robins, Ph.D., President, 4940 Audubon Ave., St. Louis, MO 63110.

March 3-5, annual meeting, Society of Professors of Child Psychiatry, Scottsdale, Ariz. Contact Joseph Green, M.D., President, 3615 Wisconsin Ave., N.W., Washington, DC 20016; 202-966-7300.

March 3-6, annual meeting, American College of Physicians, New York. Contact John Ball, M.D., J.D., Executive Vice-President, 4200 Pine St., Philadelphia, PA 19104; 215-243-1200.

March 4–8, 6th World Congress of the World Association for Dynamic Psychiatry and XIX International Symposium of the German Academy for Psychoanalysis, Munich, Germany. Contact Lehr-und Forschungsinstitut für Dynamische Psychiatrie und Gruppendynamik, Wielandstr. 27/28, 1000 Berlin 15, Berlin-West, FRG; 030-881-80-50.

March 6–8, part II examinations, American Board of Psychiatry and Neurology, San Francisco. Contact Stephen C. Scheiber, M.D., Executive Secretary, ABPN, 500 Lake Cook Rd., Suite 335, Deerfield, IL 60015; 312-945-7900.

(Continued on page A37)





The active metabolite of amitriptyline

All the efficacy of amitriptyline and a favorable side effect profile

Because of anticholinergic activity, PAMELOR (nortriptyline HCI) should be used with caution in patients who have glaucoma or a history of urinary retention.

Contraindications: 1) Concurrent use with a monoamine oxidase (MAO) inhibitor, since hyperpyretic crises, severe convulsions, and latalities have occurred when similar tricyclic antidepressants were used in such combinations; MAO inhibitors should be discontinued for at least two weeks before treatment with Pamelor** (nortriptyline HCI) is started. 2) Hypersensitivity to Pamelor (nortriptyline HCI), cross-sensitivity with other dibenzazepines is a possibility. 3) The acute recovery negrical tless myocardial infarction.

cross-sensitivity with other dibenzazepines is a possibility. 3) The acute recovery period after myocardial infarction.

Warnings: Give only under close supervision to patients with cardiovascular disease, because of the lendency of the drug to produce sinus tachycardia and to prolong conduction time; myocardial infarction, arrhythmia, and strokes have occurred. The antihypertensive action of quanethidine and similar agents may be blocked. Because of its anticholinergic activity, nortriptyline should be used with great caution in patients who have glaucoma or a history of urinary retention. Patients with a history of seizures should be followed closely, since nortriptyline is known to lower the convulsive threshold. Great care is required in hyperthyroid patients or those receiving thyroid medication, since cardiac arrhythmias may develop. Nortriptyline may impair the mental and/or physical abilities required for the performance of hazardous tasks, such as operating machinery or driving a car, therefore, the patient should be warned accordingly. Excessive consumption of alcohol may have a potentiating effect, which may lead to the danger of increased suicidal attempts or overdosage, especially in patients with histories of emotional disturbances or suicidal idealion.

Sucrolar Ideation.

Use in Pregnancy — Safe use during pregnancy and lactation has not been established; therefore, in pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards

Use in Children—Not recommended for use in children, since safety and effectiveness in the pediatric age group have not been established.

Precautions: Use in schizophrenic patients may result in an exacerbation of the psychosis or may activate latent schizophrenic symptoms: in overactive or agitated patients, increased anxiety and agitation may occur; in manic-depressive patients, symptoms of the manic phase may emerge. Administration of reserpine during therapy with a tricyclic antidepressant has been shown to produce a "stimulating" effect in some depressed patients. Iroublesome patient hostility may be aroused. Epileptiform seizures may accompany administration. Close supervision and careful adjustment of dosage are required when used with other anticholinergic drugs and sympathomimetic drugs. Concurrent administration of cruefidine can produce clinically significant increases in the plasma concentrations of the tricyclic antidepressant. Patients should be informed that the response to alcohol may be exaggerated. When essential, may be administered with electroconvulsive therapy, although the hazards may be increased. Discontinue the drug for several days, if possible, prior to elective surgery. The possibility of a suicidal attempt by a depressed patient remains after the initiation of treatment, in this regard, it is important that the least possible quantity of drug be dispensed at any given time. Both elevation and lowering of blood sugar levels have been reported.

nave been reported.

Adverse Reactions: Cardiovascular—Hypotension, hypertension, tachycardia, palpitation myocardial infarction, arrhythmias, heart block, stroke. Psychiatric—Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation, insomnia, panic, nightmares; hypomania, exacerbation of psychosis. Neurologic—Numbness, tingling, pares-

thesias of extremities; incoordination, ataxia, tremors, peripheral neuropathy; extrapyramidal symptoms, seizures, alteration in EEG patterns; tinnitus, Antichoinergic—Dry mouth and, rarely, associated sublingual adenitis, blurred vision, disturbance of accommodation, mydriasis; constipation, paralytic ileus urinary retention, delayed micturition, dilation of the urinary tract. Altergic—Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and longue), drug lever, cross-sensitivity with other tricyclic drugs. Hematologic—Bonemarrow depression, including agranulocytosis; eosinophilia; purpura, thrombocytopenia. Gastrointestinal—Nausea and vomiting, anorexia, epigastric distress, diarrhea, peculiar taste, stomatitis, abominal cramps, black-longue. Endocrine—Gynecomastia in the male, breast enlargement and galactorrhea in the female; increased or decreased libido, impotence: testicular swelling, elevation or depression of blood sugar levels, syndrome of inappropriate ADH (antiduretic hormone) secretion. Other—Jaundice (simulating obstructive), altered liver function; weight gain or loss, perspiration, tlushing, urinary frequency, nocturia, drowsiness, dizziness, weakness, tatique; headache; parotid swelling, alopecia. Withdrawal Symptoms—Though these are not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, neadache.

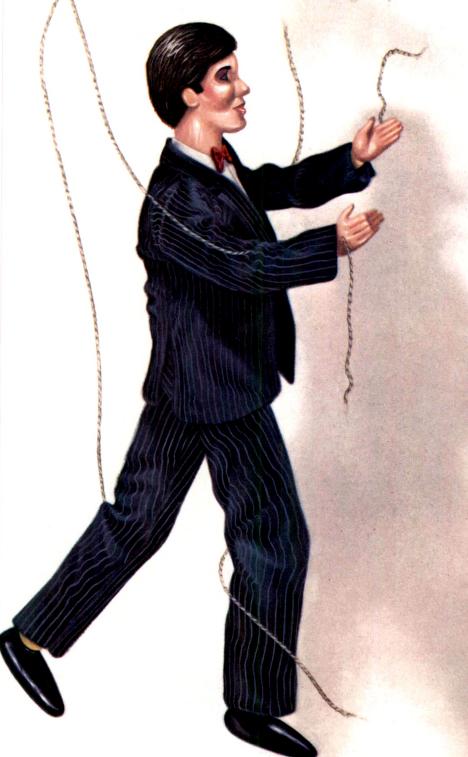
Overdosage: Toxic overdosage may result in confusion, restlessness, agitation, vomiting, hyperpyrexia, muscle rigidity, hyperactive reflexes, tachycardia. ECG evidence of impaired conduction, shock, congestive heart failure, stupor, coma, and CNS stimulation with convulsions followed by respiratory depression. Dealhs have occurred with drugs of this class. No specific antidote is known, general supportive measures are indicated, with gastric lavage.



Dorsey Pharmaceuticals

SANDOZPHARMACEUTICALS





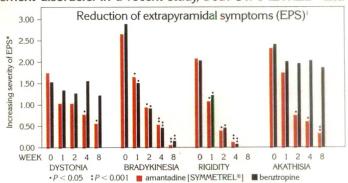
SYMMETREL® is available exclusively from Du Pont

rom the clutches of EPS

Effective control of extrapyramidal symptoms (EPS)

SYMMETREL® (amantadine HCl) has been proven clearly effective in controlling a broad range of extrapyramidal movement disorders. In a recent study, both SYMMETREL® and

benztropine "were equally effective in treating drug-induced parkinsonism; however, amantadine [SYMMETREL®] proved somewhat more effective in reducing akathisia and recurrent dystonia."



*Extrapyramidal symptoms were rated on a four-point scale of ascending severity. —adapted from

—adapted from Borison and Diamond, p 421

Fewer side effects than anticholinergics

Dramatically differentiating SYMMETREL® from anticholinergics is its favorable side effect profile. With fewer anticholinergic side effects, SYMMETREL® affords patients greater com-

fort—encouraging compliance with their antipsychotic regimen. SYMMETREL® is not metabolized and is mainly excreted in the urine. Care should be taken, however, in patients with renal impairment. SYMMETREL®. The more rational and safer therapeutic choice in the control of EPS.

Incidence	of anticholinergic si	ide effects ¹
	% patients taking amantadine	% patients taking benztropine
Dry mouth	7.4	41.6
Blurred vision	2.6	26.5
Nasal congestion	2.5	18.2
Constipation	1.8	21.4
Urinary hesitancy	1.3	7.1

—adapted from Borison and Diamond, p 431



Please see following page for brief summary of prescribing information.







BRIEF SUMMARY OF PRESCRIBING INFORMATION
INDICATIONS AND USAGE: Parkinson's Disease/Syndrome and Drug-Induced
Extrapyramidal Reactions: SYMMETREL is indicated in the treatment of idiopathic
Parkinson's disease (Paralysis Agitans), postencephalitic parkinsonism, drug-induced
extrapyramidal reactions, and symptomatic parkinsonism which may follow injury to
the nervous system by carbon monoxide intoxication. It is indicated in those elderly
patients believed to develop parkinsonism in association with cerebral arteriosclerosis. In the treatment of Parkinson's disease, SYMMETREL is less effective than levodopa, (-)-3-(3, 4-dihydroxyphenyl)-L-alanine, and its efficacy in comparison with the
anticholinergic antiparkinson drugs has not yet been established. Although anticholinergic type side effects have been noted with SYMMETREL when used in patients with
drug-induced extrapyramidal reactions, there is a lower incidence of these side effects
than that observed with anticholinergic antiparkinson drugs.
CONTRAINDICATIONS: SYMMETREL is contraindicated in patients with known
hypersensitivity to the drug.

CONTRAINDICATIONS: SYMMETREL is contraindicated in patients with known hypersensitivity to the drug.

WARNINGS: Patients with a history of epilepsy or other "seizures" should be observed closely for possible increased seizure activity.

Patients with a history of congestive heart failure or peripheral edema should be followed closely as there are patients who developed congestive heart failure while receiving SYMMETREL.

Patients with Parkinson's disease improving on SYMMETREL should resume normal activities gradually and cautiously, consistent with other medical considerations, such as the presence of osteoporosis or phlebothrombosis.

Patients receiving SYMMETREL who note central nervous system effects or blurring of vision should be cautioned against driving or working in situations where alertness is important.

PRECAUTIONS: SYMMETREL (amantadine hydrochloride) should not be discontin-PRECAUTIONS: SYMMETREL (amantadine hydrochloride) should not be discontinued abruptly since a few patients with Parkinson's disease experienced a parkinsonian crisis, i.e., a sudden marked clinical deterioration, when this medication was suddenly stopped. The dose of anticholinergic drugs or of SYMMETREL should be reduced if atropine-like effects appear when these drugs are used concurrently.

The dose of SYMMETREL may need careful adjustment in patients with renal impairment, congestive heart failure, peripheral edema, or orthostatic hypotension. Since SYMMETREL is not metabolized and is mainly excreted in the urine, it may accumulate when renal function is inadequate.

Care should be exercised when administering SYMMETREL to patients with liver disease, a history of recurrent eczematoid rash, or to patients with psychosis or severe psychoneurosis not controlled by chemotherapeutic agents. Careful observation is required when SYMMETREL is administered concurrently with central nervous system stimulants.

No long-term studies in animals have been performed to evaluate the carcinogenic potential of SYMMETREL. The mutagenic potential of the drug has not yet been determined in experimental systems.

potential of SYMMETREL. The mutagenic potential of the drug has not yet been determined in experimental systems.
Pregnancy Category C: SYMMETREL (amantadine hydrochloride) has been shown to be embryotoxic and teratogenic in rats at 50 mg/kg/day, about 12 times the recommended human dose, but not at 37 mg/kg/day. Embryotoxic and teratogenic drug effects were not seen in rabbits which received up to 25 times the recommended human dose. There are no adequate and well-controlled studies in pregnant women. SYMMETREL should be used during pregnancy only if the potential benefit justifies the potential risk to the embryo or the fetus.

Nursing Mothers: SYMMETREL is excreted in human milk. Caution should be exercised when SYMMETREL is administered to a nursing woman.

Pediatric Use: The safety and efficacy of SYMMETREL in newborn infants, and infants below the age of 1 year have not been established.

ADVERSE REACTIONS: The most frequently occurring serious adverse reactions are: depression, congestive heart failure, orthostatic hypotensive episodes, psychosis and urinary retention. Rarely convulsions, leukopenia, and neutropenia have been reported.

depression, congestive heart failure, orthostatic hypotensive episodes, psychosis and urinary retention. Rarely convulsions, leukopenia, and neutropenia have been reported.

Other adverse reactions of a less serious nature which have been observed are the following: hallucinations, confusion, anxiety; irritability; anorexia, nausea, and constipation; ataxia and dizziness (lightheadedness); livedo reticularis and peripheral edema. Adverse reactions observed less frequently are the following: vomiting; dry mouth; headache; dyspnea; fatigue, insomnia, and a sense of weakness. Infrequently, skin rash, slurred speech, and visual disturbances have been observed. Rarely eczematoid dermatitis and oculogyric episodes have been reported.

DOSAGE AND ADMINISTRATION: Adult Dosage for Parkinsonism: The usual dose of SYMMETREL (amantadine hydrochloride) is 100 mg twice a day when used alone. SYMMETREL (amantadine hydrochloride) is 100 mg twice a day when used alone. SYMMETREL has an onset of action usually within 48 hours.

The initial dose of SYMMETREL is 100 mg daily for patients with serious associated medical illnesses or who are receiving high doses of other antiparkinson drugs. After one to several weeks at 100 mg once daily, the dose may be increased to 100 mg twice daily, if necessary.

Occasionally, patients whose responses are not optimal with SYMMETREL at 200 mg daily may benefit from an increase up to 400 mg daily in divided doses. However, such patients should be supervised closely by their physicians.

Patients initially deriving benefit from SYMMETREL not uncommonly experience a fall-off of effectiveness after a few months. Benefit may be regained by increasing the dose to 300 mg daily. Alternatively, temporary discontinuation of SYMMETREL for several weeks, followed by reinitiation of the drug, may result in regaining benefit in some patients. A decision to use other antiparkinson drugs may be necessary.

Dosage for Concomitant Therapy: Some patients who do not respond to anticholinergic antiparkinson drugs a

Capsules manufactured by R. P. Scherer-North America, St. Petersburg, Florida 33702

Du Pont Pharmaceuticals E.I. du Pont de Nemours & Co. (Inc.) Wilmington, Delaware 19898



SYMMETREL is a registered U.S. trademark of E.I. du Pont de Nemours & Co. (Inc.)

REFERENCE: 1. Borison RL, Diamond Bl: Treatment of extrapyramidal side-effects: Amantadine versus benztropine. World J Psychosynthesis (special), 1984-1985, pp 40-43.

CSA CERTIFIED

SR-1

JR-1

UL LISTED

INTELLIGENT ECT FROM MECTA CORPORATION

MODULAR AND COMPUTERIZED

SR-2

O

FLEXIBILITY

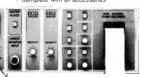


- Tiltable Liquid Crystal Display
 Bi-polar brief pulse stimulus
- · Adjustable constant current stimulus
- Audible warning prior to treatmen
 Remote control capabilities
- 100% expected seizure induction
- Totally isolated for maximum safety Exceeds UL 544 requirements
- Single or multiple energy control(s)
 All parameters displayed in text form-
- Increased energy for difficult cases
 Built-in self test for patient safety
- · Steady warning tone during treatment
- Protected STIMULUS CONTROL push button
 Timing accuracy better than 1%
- . 1 year parts and labor warranty
- Operates on 120 or 240 VAC
- · Complete with all accessories

PRINTED SELF TEST AND TREATMENT RESULTS

ADDITIONAL FEATURES INCLUDED WITH ALL SR MODELS ARE:

- EEG instrumentation amplifier
 Built-in 2 channel digital chart recorder
- Numeric timing marks during monitoring
 Printed record of energy level
- Printed date and time of treatment
- ECG instrumentation amplifier
 Selectable single or dual channel
- · Printed record of treatment and self test
- Printed record of stimulus parameters
 Modular design for maximum flexibility



JR-2 SINGLE ENERGY

SIMPLICITY

MECTA Corporation 5622 SW Kelly Street Portland, OR 97201 (503) 245-6975

"A Time to Heal...

The Retreat at The Institute Of Living A Psychiatric Treatment Program For Professionals

 Comprehensive medical and neuropsychiatric evaluation and treatment for disorders including substance abuse, personality disturbance, affective disorders, anxiety, sexual disorders, and acute psychosis

Full rehabilitation and activities therapies

☐ Follow-up and placement

The Institute of Living, a 400-bed psychiatric hospital, is certified by Medicare and is eligible for payment by most insurance carriers

Treatment team consists of those with extensive experience in the care of impaired physicians and other professionals. Health professionals at The Retreat include board-certified psychiatrists; Ph.D. psychologists; a full-time internist; The Institute's pastoral care staff; master's level nurs ing, social work, and rehabilitation

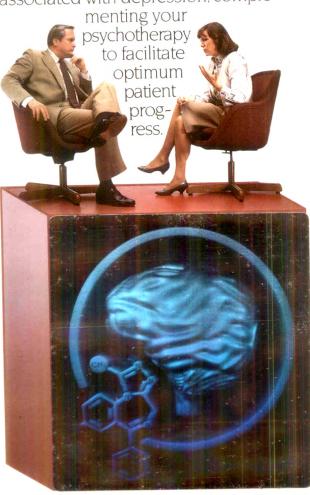


400 Washington Street, Hartford, CT 06106 (203) 241-6900 Out of state: 800-222-5797

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.

The incorporation of a triazolo ring to the basic benzodiazepine structure clearly differentiates Xanax from other benzodiazepines.

Xanax effectively relieves anxiety associated with depression, comple-





COMPLEMENTS AN EFFECTIVE THERAPEUTIC ALLIANCE

P 24363

Upjohn

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.



XANAX Tablets (alprazolam) @

CONTRAINDICATIONS

Patients with sensitivity to this drug or other benzodiazepines and in acute narrow angle glaucoma.

WARNINGS

Not of value in psychotic patients. Caution patients against hazardous occupations requiring complete mental alertness and about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Benzodiazepines can cause fetal harm in pregnant women. Warn patients of the potential hazard to the fetus. Avoid during the first trimester.

PRECAUTIONS

General: The dosage of XAÑAX Tablets should be reduced or withdrawn gradually, since withdrawal seizures have been reported upon abrupt withdrawal. If XAÑAX is combined with other psychotropics or anticonvulsant drugs, consider drug potentiation (see Drug Interaction section). Exercise the usual precautions regarding size of the prescription for depressed or suicidal patients. In elderly and debilitated patients, use the lowest possible dosage (see Dosage and Administration). Observe the usual precautions in treating patients with impaired renal or hepatic function.

Information for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing dose of the drug due to risk of dependence, (e) not stopping the drug abruptly. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistamines, ethanol and other CNS depressants. Pharmacokinetic interactions with ben-

zodiazepines have been reported. Drug/ Laboratory Test Interactions: No consistent pattern for a specific drug or specific test. Carcinogenesis, Mutagenesis, Impairment of Fertility: No carcinogenic potential or impairment of fertility in rats. *Pregnancy:* See Warnings. *Nonteratogenic Effects:* The child born of a mother on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity. Labor and Delivery: No established use. Nursing Mothers: Benzodiazepines are excreted in human milk. Women on XANAX should not nurse. Pediatric Use: Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS

Side effects are generally observed at the beginning of therapy and usually disappear with continued medication. In the usual patient, the most frequent side effects are likely to be an extension of the pharmacologic activity of XANAX, eg, drowsiness or lightheadedness.

Central nervous system. Drowsiness, lightheadedness, depression, headache, confusion, insomnia, nervousness, syncope, dizziness, akathisia, and tiredness/sleepiness.

Gastrointestinal: Dry mouth, constipation, diarrhea, nausea/vomiting, and increased salivation.

Cardiovascular: Tachycardia/palpitations, and hypotension. Sensory: Blurred vision.

Musculoskeletal: Rigidity and tremor. Cutaneous: Dermatitis/allergy. Other side effects: Nasal congestion,

weight gain, and weight loss.

In addition, the following adverse events have been reported with the use of benzodiazepines: dystonia, irritability, concentration difficulties, anorexia, transient amnesia or memory impairment, loss of coordination, fatigue, sedation, slurred speech, jaundice, musculoskeletal weakness, pruritus, diplopia,

dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention.

Paradoxical reactions such as stimulation, agitation, increased muscle spasticity, sleep disturbances, and hallucinations may occur. Should these occur, discontinue the drug.

During prolonged treatment, periodic blood counts, urinalysis, and blood chemistry analysis are advisable. Minor EEG changes of unknown significance have been observed.

DRUG ABUSE AND DEPENDENCE

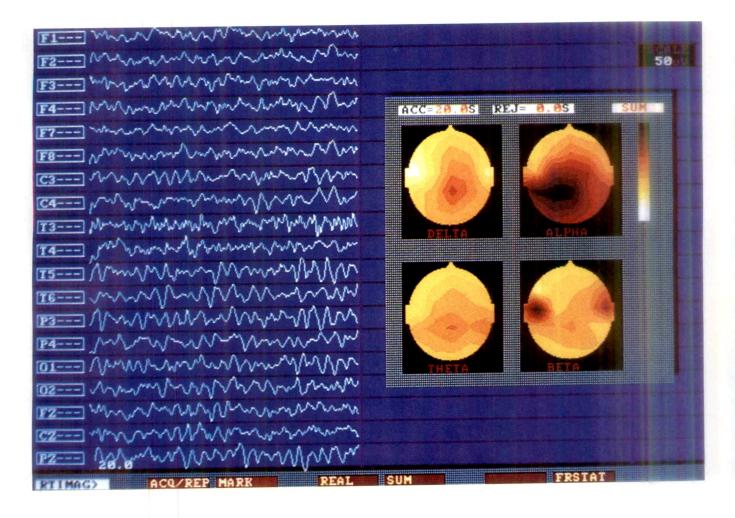
Physical and Psychological Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Withdrawal seizures have occurred upon rapid decrease or abrupt discontinuation of therapy. In all patients, dosage should be gradually tapered under close supervision. Patients with a history of seizures or epilepsy should not be abruptly withdrawn from XANAX. Addiction-prone individuals should be under careful surveillance. Controlled Substance Class: XANAX is a controlled substance and has been assigned to schedule IV.

CAUTION: FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.

B-4-S J-6338 January 1987

Upjohn

THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA



The logical way to look into the brain is through our window.

It all depends on how you look at it, of course. But when we set out to develop a superior neurodiagnostic system, we thought isn't it more logical to ask clinicians first what their needs were? That's when our engineers got to work and designed the QSI 9000. For you. We invite you to look at the

result of 7 years of development and clinical testing.

The QSI 9000 is the ultimate electrophysiologic diagnostic

electrophysiologic diagnostic system in one versatile unit. With unparalleled computer power. And full 20 channel EEG and Evoked Potential capability.

QSI 9000 has been designed to look out for the future too, with maximum adaptability to advances in computer technology. Now you can provide comprehensive EEG exams, Evoked Potential studies and the latest in Topographical Mapping without the high cost of acquiring and operating multiple diagnostic units. The QSI 9000 puts it all together. With a result that we think might surprise you. It costs less.

One look, you'll see QSI 9000's color images are faster, easier to interpret. And the system is IBM compatible so you can take advantage of the wide range of existing statistical programs.

Putting it all together, the QSI 9000 makes sense. That's why we call it the Electrophysio-Logical answer to today's neurodiagnostic needs. For more information call 1-800-387-0209.





The Electrophysio-Logical System.





Herbert D. Kleber, M.D.



Roger D. Weiss, M.D.



Ellinwood, Jr., M.D.

Cocaine. It's one of the worst of America's fast growing problems with drug abuse. Many people who are out for kicks quickly turn into addicts.

Charter's latest Medical Review enables you to learn from some of the most distinguished minds, the best current thinking in dealing with the matter of cocaine, including the most dangerous and addictive form of cocaine: "crack."

Our seventh taped symposium focuses on the work of four outstanding doctors. Together they discuss the

problems and methods of treating patients suffering from cocaine addiction.

Based on extensive nationwide research among psychiatrists the Charter Medical Review™ is brought to you in the interes

Robert O. Friedel, M.D. Moderator Vice President -Psychiatric Medicine, Charter Medical Corporation: Medical Director, Charter Westbrook Hospital, Richmond, VA.

Herbert D. Kleber, M.D. Professor of Psychiatry, Yale University School of Medicine;
Director, Substance
Abuse Treatment Unit,
Connecticut Mental
Health Center, New
Haven, CT. Roger D. Weiss, M.D. Assistant Professor of Psychiatry, Harvard Medical School: Director, Alcohol and Drug Abuse Treatment Cemer, McLean Hospital, Belmont, MA. Everett H.
Ellinwood, Jr., M.D.
Professor of Psychiatry &
Pharmacology:
Director, Behavioral
Neuropsychopharmacology Section, Department of Psychiatry, Duke
University Medical Center,
Durham, NC.

©1987 Charter Medical Corporation



CHARTER

MEDICAL CORPORATION

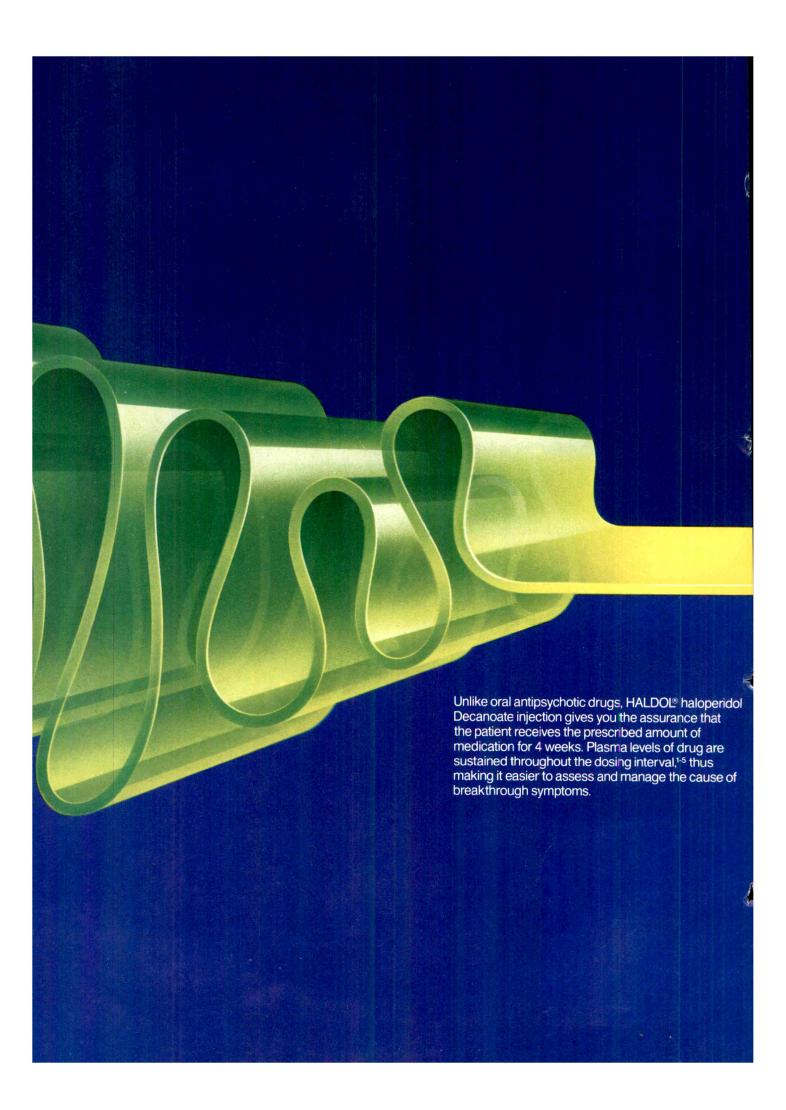
enhancing the understanding of important topics in clinical chiatry for the benefit of physicians and patients alike. Credit earned from listening to these tapes may be aimed in Category II of the Physicians Recognition vard of the AMA and Category II of the CME require-

ent of the APA. Simply fill out the coupon and we'll send you the narter Medical Review[™] audio cassette and tranription summary with our compliments.

If we work together this cold craving can be

placed by meaningful, spirited lives.

1.	
atry dicition of the state of t	ine
chia	chiatry Season Madic chology Social Work



Sustained drug levels with a single monthly dose

HALDOL DECANOATE (HALOPERIDOL) INJECTION

the therapeutic constant in schizophrenia

Pharmacokinetic profile facilitates monthly dosing

Smooth, steady drug delivery has been shown to achieve efficacy equal to oral HALDOL, but at lower monthly doses. 1 The plasma concentrations of haloperidol gradually rise, reaching a peak at about 6 days after the injection, and falling thereafter, with an apparent half-life of about 3 weeks.6

The side effects of HALDOL Decanoate are those of HALDOL. The prolonged action of HALDOL Decanoate should be considered in the management of side effects. During dose adjustment or episodes of exacerbation of psychotic symptoms, HALDOL Decanoate therapy can be supplemented with short-acting forms of HALDOL. It is recommended that patients being considered for HALDOL Decanoate therapy have, at some time, been treated with, and have tolerated well, short-acting HALDOL in order to exclude the possibility of unexpected adverse sensitivity to haloperidol. HALDOL Decanoate is administered only by deep intramuscular injection.

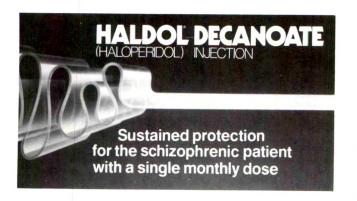
Offers sustained protection against schizophrenic relapse

Dependable delivery with HALDOL Decanoate helps provide protection for your patient to withstand the demands of daily life.

- References
 Nair NPV, Suranyi-Cadotte B, Schwartz G, et al: A clinical trial comparing intramuscular haloperidol decanoate and oral haloperidol in chronic schizophrenic patients: Efficacy, safety, and dosage equivalence. J Clin Psychopharmacol 1986;6(No. 1, Suppl):30S-37S.
 Reyntjens AJM, Heykants JJP, Woestenborghs RJH, et al: Pharmacokinetics of haloperidol decanoate. Int Pharmacopsychiatry 1982;17:238-246.
 Deberdt R, Elens P. Berghmans W, et al: Intramuscular haloperidol decanoate for neuroleptic maintenance therapy. Efficacy, dosage schedule and plasma levels. An open multicenter study. Acta Psychiatr Scand 1980;62:356-363.
 Kissling W, Möller HJ, Walter K, et al: Double-blind comparison of haloperidol decanoate and fluphenazine decanoate. Effectiveness, side-effects, dosage and serum levels during a six months' treatment for relapse prevention. Pharmacopsychiatry 1985;18:240-245.
 Roose K: Haloperidol decanoate as a replacement for maintenance therapy with intramuscular fluphenazine decanoate in schizophrenia and other chronic psychoses. Acta Psychiatr Belg 1982;82:216-223.
 Nayak RK, Doose DR, Nair NPV. The bioavailability and pharmacokinetics of oral and depot intramuscular haloperidol in schizophrenic patients (Submitted for publication).

Please see brief summary of prescribing information on next page.





The following is a brief summary only. Before prescribing, see complete prescribing information in HALDOL and HALDOL Decanoate product labeling.

Contraindications: Since the pharmacologic and clinical actions of HALDOL (haloperidol) Decanoate are attributed to HALDOL as the active medication, Contraindications, Warnings, and additional information are those of HALDOL. Some sections have been modified to reflect the prolonged action of HALDOL Decanoate.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

Warnings: Tardive Dyskinesia: Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with antipsychotic drug. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of antipsychotic treatment, which patients are likely to develop the syndrome. Whether antipsychotic drug products differ in their potential to cause tardive dyskinesia is unknown. Both the risk of developing tardive dyskinesia and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of antipsychotic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses. There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if antipsychotic treatment is withdrawn. Antipsychotic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underfying process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown. Given these considerations, antipsychotic drugs should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic antipsychotic treatment should generally be reserved for patients who suffer from a chronic illness that 1) is known to respond to antipsychotic drugs, and 2) for whom alternative, equally effective, but potentially less harmful treatments are not available or appropriate. In patients who do require treatment despite the pres

been reported. Hyperpyrexia and heat stroke, not associated with the above symptom complex, have also been reported with HALDOL.

Usage in Pregnancy: (see PRECAUTIONS - Usage in Pregnancy) Combined Use With Lithium: (see PRECAUTIONS - Drug Interactions).

General: Bronchopneumonia, sometimes fatal, has followed use of antipsychotic drugs, including haloperidol. Prompt remedial therapy should be instituted if dehydration, hemoconcentration or reduced pulmonary ventilation occur, especially in the elderly. Decreased serum cholesterol and/or cutaneous and ocular changes have been reported with chemically-related drugs, although not with haloperidol. See PRECAUTIONS - Information for Patients for information on mental and/or physical abilities and on concomitant use with other substances.

Precautions: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of transient hypotension and/or precipitation of anginal pain (if a vasopressor is required, epinephrine should not be used since HALDOL may block its vasopressor activity and paradoxical further lowering of blood pressure may occur; metaraminol, phenylephrine or norepinephrine should be used; (2) receiving anticonvulsant medications, with a history of seizures, or with EEG abnormalities, because HALDOL may lower the convulsive threshold. If indicated, adequate anticonvulsant therapy should be concomitantly maintained; (3) with known allergies or a history of allergic reactions to drugs; (4) receiving anticoagulants, since an isolated instance of interference occurred with the effects of one anticoagulant (phenindione). Concomitant antiparkinson medication, if required, may have to be continued after HALDOL is used for mania in bipolar disorders, there may be a rapid mood swing to depression. Severe neurotoxicity may occur in patients with thyrotoxicosis receiving antipsychotic medication, including HALDOL.

The 1, 5, 10 mg HALDOL tablets contain FD&C Yellow No. 5 (tartrazine) which may cause

allergic-type reactions (including bronchial asthma) in certain susceptible individuals, especially in those who have aspirin hypersensitivity.

Information for Patients: Mental and/or physical abilities required for hazardous tasks or driving may be impaired. Alcohol should be avoided due to possible additive effects and hypotension.

Drug Interactions: Patients receiving lithium plus haloperidol should be monitored closely for early evidence of neurological toxicity and treatment discontinued promptly if such signs appear. As with other antipsychotic agents, it should be noted that HALDOL may be capable of potentiating CNS depressants such as anesthetics, opiates, and alcohol.

Carcinogenesis, Mutagenesis and Impairment of Fertility: No mutagenic potential of haloperidol decanoate was found in the Arnes Salmonella microsomal activation assay.

Carcinogenicity studies using oral haloperidol were conducted in Wistar rats (dosed at up to 5 mg/kg daily for 24 months) and in Albino Swiss mice (dosed at up to 5 mg/kg daily for 18 months). In the rat study survival was less than optimal in all dose groups, reducing the number of rats at risk for developing tumors. However, although ar elatively greater number of rats survived to the end of the study in high dose male and female groups, these animals did not have a greater incidence of tumors than control animals. Therefore, although not optimal, this study does suggest the absence of a haloperidol related increase in the incidence of neoplasia in rats at doses up to 20 times the usual daily human dose for chronic or resistant patients. In female mice at 5 and 20 times the highest initial daily dose for chronic or resistant patients. In female mice mice at 5 and 20 times the same daily dose there was a statistically significant increase in pituitary gland neoplasia. In male mice, no statistically significant increase in pituitary gland neoplasia. In male mice, no statistically significant differences in incidences of total tumors or specific tumor types were noted.

noted.

Antipsychotic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of tripsychotic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary turnorigenesis: the available evidence is considered too limited to be conclusive at this time.

Usage in Pregnancy: Pregnancy Category C. Safe use in pregnancy or in women likely to become pregnant has not been established; use only if benefit clearly justifies potential hazards to the fetus.

Nursing Mothers: Infants should not be sured directed.

e retus. Nursing Mothers: Infants should not be nursed during drug treatment. Pediatric Usa: Controlled trials to establish the safety and effectiveness of intramuscular administration in children have not been conducted.

the fetus.

Nursing Mothers Infants should not be nursed during drug treatment.

Pediatric Uses Controlled trials to establish the safety and effectiveness of intramuscular administration inchildren have not been conducted.

Adverse Reactions: Adverse reactions following the administration of HALDOL. (haloperidol) Decanoate are those of HALDOL. Shoe vast experience has accumulated with HALDOL, the adverse reactions are reported for that compound as well as for HALDOL. Decanoate. As with all injectable medications, local tissue reactions have been reported with HALDOL Creanoate.

ONE Effects: Extrapyramidal Preactions** Neuromuscular (extrapyramidal) reactions have been reported frequently, often during enter the days of treatment. Generally, they involved Parkinson-like symptoms which when first the w days of treatment. Generally, they involved Parkinson-like symptoms which when first the w days of treatment denerally they involved Parkinson-like symptoms which when first the w days of treatment of the presentation of the presentation

IMPORTANT: Full directions for use should be read before HALDOL or HALDOL Decanoate is administered or prescribed.

For information on symptoms and treatment of overdosage, see full prescribing informa-

The short-acting HALDOL injectable form is intended only for acutely agitated psychotic patients with moderately severe to very severe symptoms.



ALZHEIMER'S DEMENTIA

Cure of the disease is still out of reach. In as devastating a condition as this, HYDERGINE* LC (ergoloid mesylates) can provide some relief of symptoms. This is a contribution to both patient and family.

is indicated for some patients over age sixty who manifest signs and symptoms of idiopathic mental decline. It appears that individuals who respond to HYDERGINE LC therapy are those who would be considered to suffer from some ill-defined process related to aging or to suffer from some underlying condition such as Alzheimer's dementia. Potentially reversible and treatable conditions should be excluded before using HYDERGINE LC therapy.

HYDERGINE® LC (ergoloid mesylates) liquid capsules, 1 mg

HYDERGINE LC (ergoloid mesylates) liquid capsules

Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, selfcare, apparent motivation) in patients over sixty. It appears that individuals who respond to HYDERGINE therapy are those who would be considered clinically to suffer from some ill-defined process related to aging or to have some underlying dementing condition, such as primary progressive dementia, Alzheimer's dementia, senile onset, or multi-infarct dementia. Before pre-scribing HYDERGINE® (ergoloid mesylates), the physician should exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis regardless of etiology (see Contraindications).

Use of HYDERGINE therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and overall impression of clinical status.

Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology. Precautions: Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing HYDERGINE (ergoloid mesylates) preparations.

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

Dosage and Administration: I mg three times daily. Alleviation of symptoms is usually gradual and results may not be observed for 3-4 weeks.

How Supplied: HYDERGINE LC (liquid capsules); 1 mg, oblong, off-white, branded "HYDERGINE LC 1 mg" on one side. "&" other side. Packages of 100 and 500. (Encapsulated by R. P. Scherer, N.A., Clearwater, Florida 33518).

HYDERGINE (ergoloid mesylates) tablets (for oral use); 1 mg, round, white, embossed "HYDERGINE 1" on one side, "&" other side. Packages of 100 and 500.

Each liquid capsule or tablet contains ergoloid mesylates USP as follows: dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydroalpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg.

Also available: HYDERGINE sublingual tablets: 1 mg, oval, white, embossed "HYDERGINE" on one side, "78-77" other side. Packages of 100 and 1000. 0.5 mg, round, white, embossed "HYDERGINE 0.5" on one side, "\$\delta\$" other side. Packages of 100 and 1000.

HYDERGINE liquid; 1 mg/ml. Bottles of 100 mg with an accompanying dropper graduated to deliver 1 mg.

[HYD-ZZ24-6 15 84]

Before prescribing, see package circular for full product information. HYD-1087-1



DORSEY PHARMACEUTICALS
Division of

Sandoz Pharmaceuticals Corporation East Hanover, NJ 07936



PSYCHIATRISTS

The Southern California Permanente Medical Group, a multi-specialty group practice, is now accepting applications from General, Child, and Geriatric Psychiatrists who are board eligible/certified for outpatient positions at various clinics throughout Southern California.

Additionally, we are seeking a General Adult/Adolescent Psychiatrist with bi-lingual (English/Spanish) skills for the inpatient Mental Health Center in Los Angeles.

Salaries are competitive and the benefits offered are outstanding. They include: professional liability, medical and dental coverage, vacation and sick leave, continuing education, life insurance and retirement plans. After two years full-time employment, physicians are eligible for consideration to the partnership.

Please call (818) 405-3224 for a physician application or submit your curriculum vitae to:



KAISER PERMANENTE
SOUTHERN CALIFORNIA
PERMANENTE MEDICAL GROUP

Ronald Fitzgerald, M.D. c/o Physician Recruitment Dept. 61AJP10 Walnut Center Pasadena, CA 91188-8854

Equal Opportunity Employer M/F/H

pprox PACIFIC NORTHWEST pprox

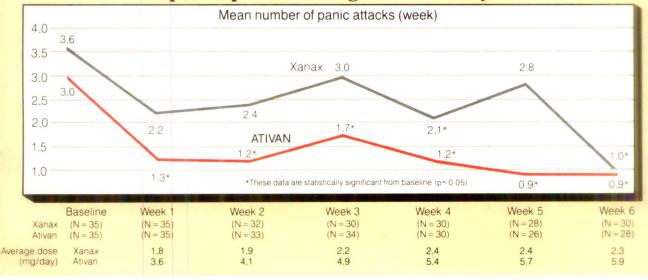
Our 46-physician multispecialty clinic is seeking a Board certified/Board eligible Psychiatrist. Guaranteed salary plus percentage. Live in a city of 42,000, the home of Oregon State University.

Send C.V. to

Bernie H. Parsons, Administrator The Corvallis Clinic, P.C. 3680 N.W. Samaritan Drive Corvallis, Oregon 97330



Ativan® vs Xanax®† (alprazolam) in reduction of panic episodes during six-week study¹



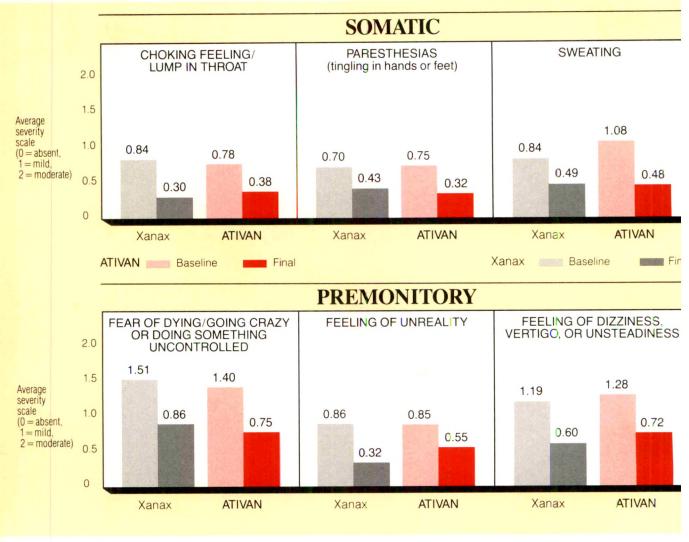
Helps keep panic attacks under contr

See last page for brief summary of prescribing information.

^{*}As defined in *Diagnostic and Statistical Manual of Mental Disorders* (Third Edition, Revised). Used by permission of the American Psychiatric Association.
†Xanax is a registered trademark of The Upjohn Company.

Ativan® (lorazepam) effectively reduce

A multicenter, double-blind, six-week study compared Ativan® (N = 40) to Xanax (N = 37) in relieving symptoms of panic disorder as defined by DSM-III-R diagnostic criteria^{1,2}



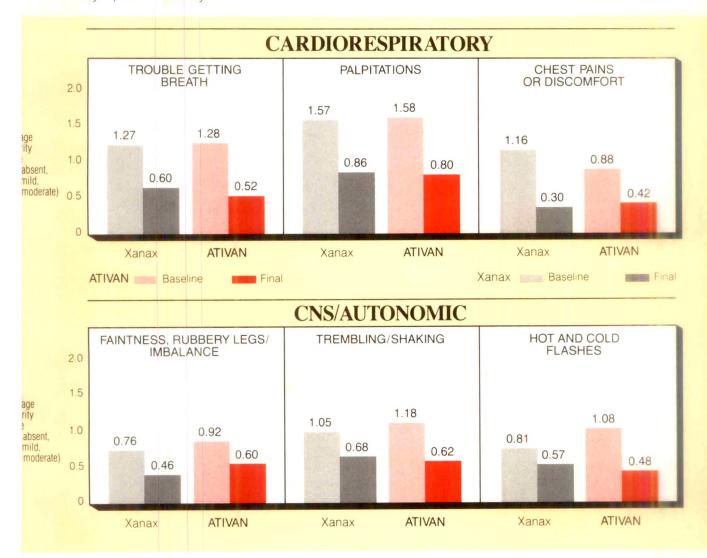
The panic attacks usually last minu initially, are unexpected, i.e., they do no situation that almost always causes are attacks are not triggered by situations

UDY CONFIRMS:

najor symptoms of panic attacks

Efficacy equal to Xanax in reducing the symptoms of panic attacks'

As compared to Xanax, Ativan* demonstrated equivalent reduction in individual symptom severity



Ativan[®] (lorazepam) (lorazepam)

Helps keep panic attacks under control

For relief of anxiety Prescribe Ativan®

Because:

Simple metabolism by conjugation, no active metabolites

Clearance is not significantly delayed by age, liver, or kidney dysfunction

Little likelihood of drug interactions with numerous, commonly prescribed medications

(All benzodiazepines produce additive sedative effects when taken with alcohol or other CNS depressants.)



Specify Ativan®—maintain the integrity of your prescription while assuring your patients' therapy

Indicate one of the following on your prescriptions, as appropriate to your state laws:

- Do not substitute
- Dispense as written
- Brand necessary
- May not substitute
- Medically necessary
- No substitutions
- NDPS (no drug product selection)

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle

glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants. Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety consider possibility for

Precautions: In depression accompanying anxiety, consider possibility for

suicide
For elderly or debilitated patients, initial daily dosage should not exceed 2mg to
avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any
antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual
precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been
shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than
tyear at Brog/ko/day. No effect dose was 1.25mg/ko/day (about 6 times maxi-I year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geritatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS. Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

have been performed PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drugtreated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetai loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiaze-poxide, diazepam and meprobamate) during thist trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide. lorazepam and its glucuronide

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sectation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety. related to relief of anxiety.

Transient amnesia or memory impairment has been reported in association with the use of benzodiazepines.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate injection U.S.P. Usefulness of dialysis has not been determined.

DOSAGE: Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety or transient situational stress, 2-4mg h.s.

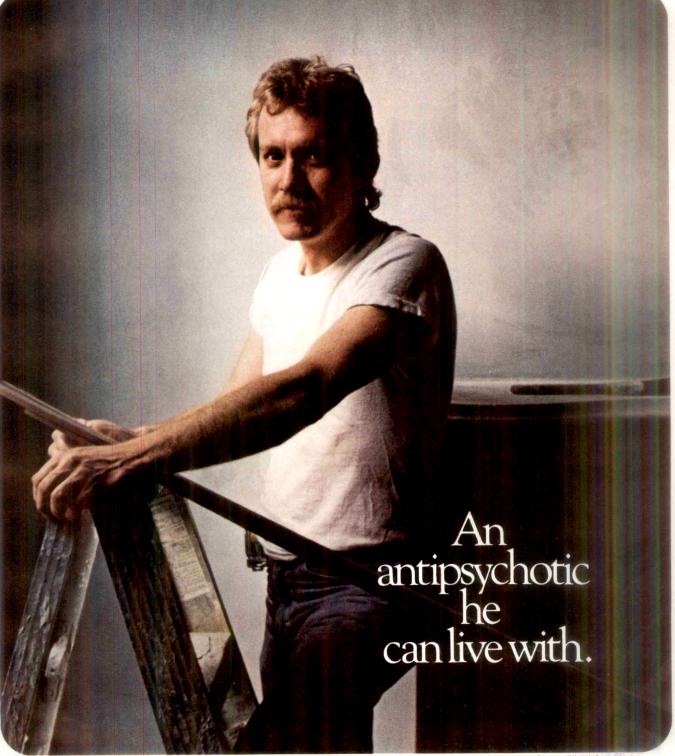
HOW SUPPLIED: 0.5, 1.0 and 2.0mg tablets.

References: 1. Data on file, Wyeth Laboratories 2. American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders, ed 3 (revised) Washington, DC. American Psychiatric Association, 1987

The appearances of Ativan tablets are registered trademarks of Wyeth Laboratories



mesoridazine as the besylate IM/CONCENTRATE/TABLETS (R)



Please see following page for brief summary of prescribing information.

as the besylate R

(mesoridazine) besylate tablets USP (mesoridazine) besylate injection USP (mesoridazine) besylate oral solution USP 0000

Tablets: 10, 25, 50 and 100 mg

Concentrate: 25 mg/ml



Brief Summary of Prescribing Information

Contraindications: As with other phenothiazines, Serentil® (mesoridazine), is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

Warnings: Tardive Dyskinesia: Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most

process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown. Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness 1) that is known to respond to neuroleptic drugs, and 2) for which alternative, equally effective but potentially less harmful treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically. If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome. (For further information about the description of tardive dyskinesia and its clinical detection, please refer to the sections on Information for Patients and Adverse Reactions). Where patients are participating in activities requiring complete mental alertness (e.g. driving) it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually.

driving) it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually. Usage in Pregnancy: The safety of this drug in pregnancy has not been estab ished; hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus. Usage in Children: The use of Serentil (mesoridazine) in children under 12 years of age is not recommended, because safe conditions for its use have not been established. Attention should be paid to the fact that phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides.

Precautions: While ocular changes have not to date been related to Serentil® (mesoridazine), one should be aware that such changes have been seen with other drugs of this class.

(mesoridazine), one should be aware that such changes have been seen with other drugs of this class.

Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least one-half hour after injection.

Leukopenia and/or agranulocytosis have been attributed to phenothiazine therapy. A single case of transient granulocytopenia has been associated with Serentil. Since convulsive seizures have been reported, patients receiving anticonvulsant medication should be maintained on that regimen while receiving Serentil.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Itssue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitto, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Information for Patients: Given the likelihood that some patients exposed chronically to neuroleptics will develop tardive dyskinesia, it is advised that all patients in whom chronic use is contemplated be given, if possible, full information about this risk.

Adverse Reactions: Drowsiness and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity and motoric effects) which occurred later i

reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiress, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos) have been reported.

Autonomic Nervous System: Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and burred vision have occurred in some instances.

Genitourinary System: Inhibition of ejacu ation, impotence, enuresis, incontinence have been reported.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachinactic have been.

Skin: liching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported. Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects) have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects) have occurred with sould be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:
Autonomic Reactions: Missis, obstipation, anorexia, paralytic ileus.
Cutaneous Reactions: Erythema, exfoliative dermatitis, contact dermatitis.
Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.
Allergic Feactions: Fever, laryngeal edema, angioneurotic edema, asthma.
Hepatotoxicity: Jaundice, biliary stasis.
Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T wave and appearance of a wave tentatively identified as a bilid T or a U wave have been observed in some patients receiving the phenothiazine tranquilizers, including Serentil® (mesoridazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible, While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, it should be noted that sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing characteristic electrocardiographic changes while taking the drug. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. Hypotension, rarely resulting in cardiac arrest, has been noted.

Extrapyramidal Symptoms

periodic electrocardiograms has been proposed but would appear to be of questionate value as a predictive device. Hypotension, rarely resulting in cardiac arrest, has been noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia. Tardive Dyskinesia: Chronic use of neuroleptics may be associated with the development of tardive dyskinesia. The salient features of this syndrome are described in the WarnIngs section and below.

The syndrome is characterized by involuntary choreoalhetoid movements which variously involve the tongue, face, mouth, lips, or jaw (e.g. protrusion of the tongue, putfing of cheeks, puckering of the mouth, chewing movements), trunk and extremities. The severity of the syndrome and the degree of impairment produced vary widely. The syndrome may become clinically recognizable either during treatment, upon dosage reduction, or upon withdrawal of treatment. Movements may decrease in intensity and may disappear altogether if further treatment with neuroleptics is withheld. It is generally believed that reversibility is more likely after short rather than long-term neuroleptic exposure. Consequently, early detection of tardive dyskinesia is important. To increase the likelihood of detecting the syndrome at the earliest possible time, the dosage of neuroleptic drug should be reduced periodically (if clinically possible) and the patient observed for signs of the disorder. This maneuver is critical, for neuroleptic drugs may mask the signs of the syndrome.

Endocrine Disturbances: Menstrual irregularities, altered libido gynecomastia, lactation, weight gain, edema. False positive pregnancy tests have been reported.

Urinary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behaviora effects suggestive of a paracoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently a pec

erythematosus-like syndrome.

How Supplied
Serentile** lablets, for oral administration: 10 mg, 25 mg, 50 mg, and 100 mg mesoridazine (as the besylate). Bottles of 100.

Serentile Ampuls, for intramuscu ar administration: 1 ml (25 mg mesoridazine (as the besylate)). Boxes of 20 and 100.

Serentile Concentrate, for oral administration: Contains 25 mg mesoridazine (as the besylate) per ml, alcohol, USP, 0.61% by volume.

Immediate containers: Amber glass bottles of 4 fl oz (118 ml) packaged in cartons of 12 bottles, with an accompanying dropper graduated to deliver 10 mg, 25 mg and 50 mg of mesoridazine (as the besylate).

Consult package insert before prescribing.

SE-BPI-9/85



Calendar

(Continued from page A16)

March 9–12, Sixth Annual Symposium in Forensic Psychiatry, American College of Forensic Psychiatry, Palm Springs, Calif. Contact Ed Miller, Executive Director, 26701 Quail Creek, Suite 295, Laguna Hills, CA 92656; 714-831-0236.

March 14–19, annual meeting, American Society of Clinical Hypnosis, Chicago. Contact William F. Hoffmann, Jr., Executive Vice-President, 2250 East Devon Ave., Suite 336, Des Plaines, IL 60018; 312-297-3317.

March 17, annual meeting, American Board of Medical Specialties, Chicago. Contact Donald G. Langsley, M.D., Executive Vice-President, One American Plaza, Suite 805, Evanston, IL 60201; 312-491-9091.

March 20–23, annual meeting, American Association for Counseling and Development, Chicago. Contact Patrick J. McDonough, Ed.D., Executive Director, 5999 Stevenson Ave., Alexandria, VA 22304; 703-823-9800.

March 20–23, annual meeting, American College of Mental Health Administration, Woodstock, Vt. Contact Peg Pearson, Administrative Assistant, P.O. Box 66, White River Junction, VT 05001; 802-295-9363, ext. 591.

March 24–25, Fourth National Traumatic Scan Injury Symposium, Maryland Institute for Emerge: y Medical Services Systems, Baltimore. Contact Robert: Schwartz, M.Ed., CCC/SLP, Director, Speech-Communication Disorders Program, MIEMSS, 22 S. Greene St., Ball more, MD 21201; 301-328-6101.

March 24-26, annual meeting, American Ps choson atic Society, Inc., Toronto. Contact George K. Degra C., Executive Director, 1311A Dolley Madison Blvd., McLear VA 22 01: 703-556-9222.

March 25–27, annual meeting, Association fo Child Psychoanalysis, New Orleans. Contact Robert L. 7 son, M.D.. President, 6901 Meade St., Pittsburgh, PA 152(3; 412-363-0636.

March 27–31, annual meeting, American Orthopsychiatric Association, San Francisco. Contact ORTHO, 1) West 44th St., Suite 1616, New York, NY 10036; 212-35. 5770.

March 30-April 2, annual meeting, National Council of Community Mental Health Centers, Boston. Contact Frank H. Bailey, Executive Director, 6101 Montros. Rd., Suite 360, Rockville, MD 20852; 301-984-6200.



WORLD PSYCHIATRIC ASSOCIATION REGIONAL SYMPOSIUM

Hosted by the American Psychiatric Association

October 13-16, 1988 Washington, D.C.

The Research and Clinical Interface for Psychiatric Disorders

Continuing Medical Education Credits will be offered.

SCIENTIFIC AND ORGANIZING COMMITTEE:

Robert E. Hales, M.D., Chair Allen J. Frances, M.D. D. Ray Freebury, M.D. John Morihisa, M.D. Betty Pfefferbaum, M.D. Melvin Sabshin, M.D. Henry H. Work, M.D.

For further information, contact: Ellen Mercer, Office of International Affairs, American Psychiatric Association, 1400 K St., N.W., Washington, D.C. 20005 U.S.A. Phone: 202-682-6286

LIBRIUM®

chlordiazepoxide HCI/Roche (v)
5-mg, 10-mg, 25-mg capsules
Before prescribing, please consult complete
product Information, a summary of which follows:
Indications: Management of anxiety disorders;
short-term relief of anxiety symptoms, acute alcohol
withdrawal symptoms, preoperative apprehension
and anxiety. Usually not required for anxiety or
tension associated with stress of everyday life. Efficacy beyond four months not established by
systematic clinical studies. Periodic reassessment of
therapy 'ecommended.
Contraindications: Known hypersensitivity to the

drug. Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressantsmay have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms (including convulsions) reported after abrupt cessation of extended use of excessive doses are similar to those seen with barbiturates. Milder symptoms reported infrequently when continuous therapy is abruptly ended. Avoid abrupt discontinuation; gradually taper dosage.

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

become pregnant.

Precautions: In the elderly and debilitated, and in childrer over six, limit to smallest effective dosage (Initially 10 mg or less per day) to preclude atoxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiozines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precaurions in treatment of anxiety states with evidence of impending depression, suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically. Due to isolated reports of exacerbation, use with caution in patients with porphyria.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts andliver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults. Mild and moderate anxiety disorders and symptoms, 5 or 10 mg f.i.d. or q.i.d.; severe states, 20 or 25 mg f.i.d. or q.i.d. (See Precautions).

Supplied: Librium® (chlordiazepoxide HCl/Roche)
Capsules, 5 mg, 10 mg and 25 mg—bottles of 100
and 500; Tel-E-Dose® packages of 100, available in
boxes of 4 reverse-numbered cards of 25, and in
boxes containing 10 strips of 10. Libritabs®
(chlordiazepoxide/Roche) Tablets, 5 mg and 10 mgbottles of 100 and 500; 25 mg—bottles of 100. With
respect to clinical activity, capsules and tablets are
indistinguishable.



Do not substitute Librium® brand of chlordiazepoxide HCI/Roche ©







Nobody does it better.



The American Psychiatric Association

1400 K Street, N.W., Washington, D.C. 20005

OFFICERS 1987-1988

George Pollock Paul J. Fink President: President-Elect: Vice-President: Herbert Pardes Vice-President: Allan Beigel Elissa P. Benedek Secretary: Treasurer: Alan Levenson

ASSEMBLY

Speaker: Irvin M. Cohen iker-Elect: John S. McIntyre Recorder: Dorothy A. Starr Speaker-Elect:

MEDICAL DIRECTOR'S OFFICE

Medical Director: Deputy Medical Directors:

Melvin Sabshin Donald W. Hammersley Harold A. Pincus Carolyn B. Robinowitz Jeanne Spurlock

BOARD OF TRUSTEES

Robert J. Campbell III Frederick Gottlieb Lawrence Hartmann Lawrence Hartmann
Linda Logsdon
Philip M. Margolis
Carol C. Nadelson
Pete C. Palasota
Robert O. Pasnau
Douglas A. Sargent
Chester W. Schmidt, Jr.
John A. Talbott
Hugo Van Dooren Hugo Van Dooren William L. Webb, Jr.

CHAIRPERSONS OF COUNCILS, COMMISSIONS, COMMITTEES, AND TASK FORCES

CONSTITUTIONAL	COMMITTEES
Rudgat	

Steven S. Sharfstein Leigh M. Roberts Constitution and By-Laws Elections Bernice Elkin William Webb, Jr. Ethics Boyd L. Burris John S. McIntyre Robert O. Pasnau Tellers Membership Nominating Reference Paul J. Fink Resource Development L. Douglas Lenkoski

COUNCIL ON AGING Gene David Cohen Nursing Homes and Elderly Mentally Ill Benjamin Liptzin Alzheimer's Disease Éric D. Caine Reimbursement for Elderly Mentally Ill Howard Goldman

COUNCIL ON CHILDREN, ADOLESCENTS, AND THEIR FAMILIES

Larry B. Silver Chronically Ill and Emotionally Handicapped Children
Confrontational Therapies
Juvenile Justice Issues
Psychiatry and Mental Health in Schools Marcelino Amaya Mark Blotcky William Buzogany Irving H. Berkovitz Sandra J. Kaplan Family Violence and Sexual Abuse

COUNCIL ON ECONOMIC AFFAIRS Donald J. Scherl Financing and Marketing Howard Gurevitz JCAH Standards for Hospital-Based, Hospital-Related Services Gerald H. Flamm

Interprofessional Affairs Mil Social Security Income/Disability Insurance Mildred Mitchell-Bateman Arthur Meyerson Joseph T. English Robert W. Gibson Prospective Payment Issues Future Trends in Private Insurance Psychiatrist Payment Boris Astrachan Quality Assurance George Wilson

COUNCIL ON INTERNAL

ORGANIZATION Ronald Shellow Arrangements Gilles Plante, Gaston Harnois Scientific Program Robert Hales Bernard Morenz Scientific and Physician-Patient Educational Services Exhibits Louis F. Rittelmeyer, Jr. Hugh James Lurie Wandal W. Winn Video Information Systems Grants and Awards Alan I. Levenson Foundations' Fund Prize for Research in Psychiatry Ira Glick

Manfred S. Guttmacher Award Marie H. Eldredge Award Hospital and Community Psychiatry Achievement Awards Isaac Ray Award Ittleson Award Weinberg Memorial Award McGavin Award Vestermark Award Samuel G. Hibbs Award Advertising Headquarters Member Life, Accident, and Health Insurance Special Benefit Programs Personnel Advertisers and Exhibitors Telemedical Services History and Library Exhibits Advisory Friends of the APA PIA Foundation Hospital Research Awards

COUNCIL ON INTERNATIONAL **AFFAIRS**

Abuse and Misuse of Psychiatry and **Psychiatrists** Inter-American Council Liaison Human Rights Problems of Americans Overseas Psychosocial Aspects of the Middle East Process International Education Joint Meeting in China World Psychiatric Association Regional Symposium in 1988

COUNCIL ON MEDICAL EDUCATION AND CAREER DEVELOPMENT

Administrative Psychiatry Medical Student Éducation Graduate Education Continuing Education Consultation-Liaison Psychiatry and Primary Care Education Impaired Physician Communication Between APA and ABPN

Robert Stubblefield Bernice E. Coleman

> Gail Barton Richard Rada Dennis Cantwell Sanford Finkel Lenore F.C. Terr Bryce Templeton

Will Strathmann Raymond I. Band

Harvey Bluestone Abram M. Hostetter William Sorum Henry H. Work Jane Preston Lucy Ozarin Joseph B. Honnigford Cynthia Rose H. Richard Lamb

Harold M. Visotsky

Michael R. Zales Evaristo Gomez Lawrence Hartmann Eric Plaut

> George Tarjan Normund Wong Herbert Pardes

> > Robert Hales Louis J. West

Robert L. Williams Stephen L. Rachlin Gerald A. Melchiode Stefan Stein John W. Goethe

Troy L. Thompson Stephen Scheiber Richard I. Shader

James Margolis Henry Weinstein Private Practice Herbert Pardes Recertification Jails and Prisons Independent Study Ian Alger Gordon Darrow Strauss Phyllis Amabile Walter E. Barton James T. Barter Leonora K. Petty Psychiatric Services in the Military PKSAP-VI Practice of Psychotherapy Marcia Kraft Goin Residents APA/Burroughs Wellcome Fellowship APA/Mead Johnson Fellowship Practice Issues in Organized/Managed Care Haroutun Babigian Howard V. Zonana COUNCIL ON PSYCHIATRY AND LAW Minority Fellowship Program Charles Pinderhughes Aron S. Wolf Confidentiality Psychiatric Leadership in Public Mental Health Programs Steven Edward Katz COUNCIL ON RESEARCH Herbert Pardes Cost Effectiveness in Consultation-Use of Laboratory Tests in Psychiatry Alexander Glassman Frederick G. Guggenheim Liaison Psychiatry Safety and Performance Standards for Richard D. Weiner Electroconvulsive Therapy Devices Long-Term Effects of Lithium on Kidney Sudden Death Pedro Ruiz COUNCIL ON NATIONAL AFFAIRS George R. Heninger Abuse and Misuse of Psychiatry in U.S. Asian-American Psychiatrists Roger Dale Walker George M. Simpson Joyce S. Kobayashi Thelissa A. Harris Treatments of Psychiatric Disorders T. Byram Karasu Black Psychiatrists Tardive Dyskinesia John Michael Kane American Indian and Alaskan Psychosocial Treatment Research Biographical Directory John P. Docherty David J. Knesper Carl Salzman Native Psychiatrists Linda Cross S. Arshad Husain Foreign Medical Graduates Benzodiazepine Dependency Psychiatric Diagnosis and Assessment Religion and Psychiatry Marc Galanter Allen J. Frances Hispanic Psychiatrists Gladys Egri John M. Kane Nada Logan Stotland James Paul Krajeski Research on Psychiatric Treatments Women Gay, Lesbian, and Bisexual Issues Occupational Psychiatry Duane Q. Hagen Stuart E. Nichols, Jr. Paul Appelbaum COMMISSION ON JUDICIAL ACTION Psychiatric Aspects of AIDS Psychological Aspects of Nuclear Arms Dave M. Davis CONSULTATION SERVICES BOARD Judith E. Lipton Martin Symonds Development Victimization Flissa P. Benedek ETHICS APPEALS BOARD **COUNCIL ON PSYCHIATRIC** JOINT COMMISSION ON PUBLIC Naomi Goldstein **SERVICES** AFFAIRS Harvey L. Ruben William B. Hunter Federal Government Health Services Richard J. Frances Edward Kaufman Alcoholism JOINT COMMISSION ON GOVERNMENT RELATIONS Drug Abuse Rehabilitation Arthur T. Meyerson Ernest Klatte John J. McGrath State Mental Health Systems SPECIAL COMPONENTS Mark Gould American Hospital Association Functions of the Hospital and Community Frederick Amling John A. Talbott Robert J. Campbell III Investment Advisory Committee Psychiatry Service, Journal, and Institute Commission on Professional and Hospital H. Richard Lamb Long-Range Planning Committee Executive Compensation Committee Work Group on Federal Government Henry Pinsker Activities

Coming in the November 1987 issue of

Stuart L. Keill

David Cutler

Institute on Hospital and Community

Psychiatry Program Chronically Mentally Ill Organizational Structure

Liaison With PRMS, Inc.

Conference on Future of Psychiatry

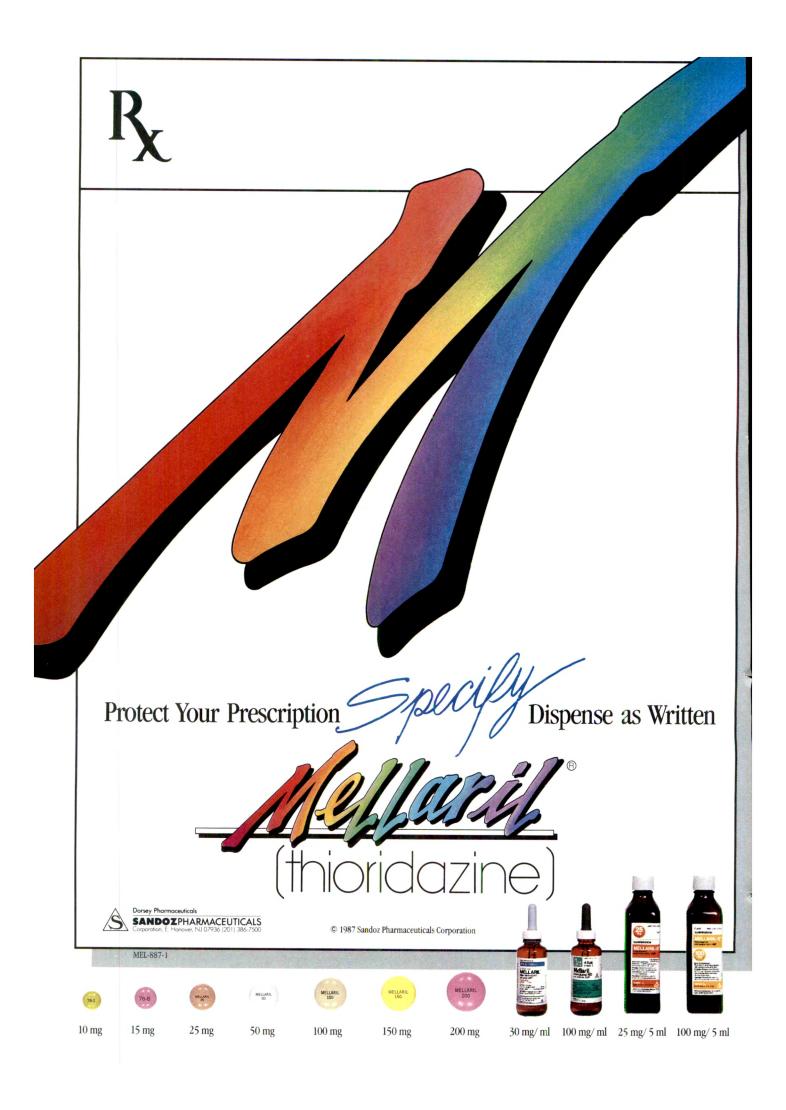
THE AMERICAN JOURNAL OF PSYCHIATRY

Can Antidepressants Cause Mania and Worsen the Course of Affective Illness? By Thomas A. Wehr and Frederick K. Goodwin

Psychiatry and the Nursing Home
By Soo Borson, Benjamin Liptzin, James Nininger, et al.

Daniel X. Freedman

John A. Talbott Alan Levenson



The Dexamethasone Suppression Test: An Overview of Its Current Status in Psychiatry

The APA Task Force on Laboratory Tests in Psychiatry

The dexamethasone suppression test (DST) has had unprecedented evaluation among biological tests proposed for clinical use in psychiatry. It is hypothesized to reflect pathophysiologic changes at the CNS level. The sensitivity of the DST (rate of a positive outcome, or nonsuppression of cortisol) in major depression is modest (about 40%–50%) but is higher (about 60%–70%) in very severe, especially psychotic, affective disorders, including major depression with psychotic as well as melancholic features, mania, and schizoaffective disorder. The specificity (true negative outcome) of the DST in normal control subjects is above 90%, but it varies from less than 70% to more than 90% in psychiatric conditions that often need to be separated from major affective disorders. In dementia the specificity is even lower. In addition, a number of medical conditions, including severe weight loss and use of alcohol and certain other drugs (barbiturates, anticonvulsants, and others), can produce false positive results.

Positive initial DST status in major depression does not add significantly to the likelihood of antidepressant response, and a negative test is not an indication for withholding antidepressant treatment. Some recent data suggest that DST-positive depressions (cortisol nonsuppression) are less likely than DST-negative cases (cortisol suppression) to respond to a placebo. If this is confirmed, it would increase the real magnitude of the difference in treatment response between DST-positive and DST-negative depressed patients. Failure to convert to normal suppression of cortisol with apparent recovery from depression suggests an increased risk for relapse into depression or suicidal behavior. Although the clinical utility of the DST as currently understood is limited, in certain specific situations its thoughtful use may aid clinical decision making. The association of an abnormal test result with major affective disorders encourages continued research on the DST.

(Am J Psychiatry 1987; 144:1253-1262)

In recent years, several endocrinological measures have been investigated for their possible value in improving psychiatric diagnosis and prediction of clin-

Received Nov. 17, 1986; revised May 1, 1987; accepted May 29, 1987. The task force included Alexander H. Glassman, M.D., chairperson; George W. Arana, M.D.; Ross J. Baldessarini, M.D.; Walter A. Brown, M.D.; Bernard J. Carroll, M.D., Ph.D.; John M. Davis, M.D.; David J. Greenblatt, M.D.; Gerald L. Klerman, M.D.; Paul Orsulak, Ph.D.; Joseph J. Schildkraut, M.D.; and Richard I. Shader, M.D. Address reprint requests to Dr. Glassman, New York State Psychiatric Institute, 722 West 168th St., New York, NY 10032.

The authors thank Martin H. Teicher for statistical assistance. Copyright © 1987 American Psychiatric Association.

ical outcome. Among these, the dexamethasone suppression test (DST) has been studied especially intensively. The DST originally was developed as a diagnostic aid to elucidate dysfunction of the hypothalamic-pituitary-adrenal (HPA) axis in endocrine disease (1). Since the observation that cortisol levels are disturbed (2–5) and that DST results are frequently abnormal (2-4, 6) in major depression, this test has been applied to aid in defining major or melancholic depression (2–4, 6, 7). In the past decade, the search for a clinically useful marker for major depression has led the DST to become the single most extensively studied biological test in psychiatry (8–15). Sufficiently extensive and varied clinical experience with the DST has accumu-

lated in recent years to allow an appraisal of the current status of the test.

METHOD

In this appraisal, much of the very large literature on the DST was reviewed by the task force. Such a review necessarily involves a number of judgments. In this appraisal we tried to base conclusions on studies that adhered to reasonable scientific standards. Few studies meet ideal criteria, such as the use of consistently defined samples, random assignment, appropriate control subjects, and double-blind methodology. Some readers might question which studies were included or excluded, and not all studies used are cited in the reference list, in part because there have been several extensive reviews of this topic recently (8–15). Moreover, different selections and interpretations of data in this extensive literature can yield differences in precise numerical data. Nevertheless, we believe that our conclusions, based on trends found in multiple studies and hundreds of cases, are reasonable. Relatively recent observations or isolated older reports in which limited data were available are discussed in the text but are not usually included in the conclusions.

DST PROCEDURE AND LABORATORY ASSAY OF CORTISOL.

In the most widely employed procedure for the DST in psychiatry, 1.0 mg of the potent, long-acting synthetic steroid dexamethasone is taken at 11:00 p.m., a low point in the circadian rhythm of endogenous corticosteroid secretion. The drug normally suppresses the release of cortisol and other adrenocorticosteroids into plasma by blocking release of corticotropinreleasing factor (CRF) from the hypothalamus and of ACTH from the anterior pituitary. The mechanisms involved probably mimic incompletely defined physiologic "feedback" effects of glucocorticoids in the HPA axis and may involve effects within the brain. Normally, the suppression of plasma cortisol by this dose of dexamethasone persists for at least 24 hours. On the day after administration of dexamethasone, blood samples for determination of plasma cortisol concentration are most commonly drawn at 8:00 a.m., 4:00 p.m., and 11:00 p.m., although other combinations of afternoon and evening samples probably yield similar results. For convenience, often only an afternoon sample is obtained from outpatients, but this does result in a modest loss of test sensitivity. An elevated plasma concentration of cortisol in any blood sample obtained between 9 and 24 hours after the dose of dexamethasone indicates failure of normal suppression of cortisol levels and signifies an abnormal (or positive) test result. The criterion level to define normal plasma concentrations of cortisol under such test conditions is commonly set at 5 µg/dl (50 ng/ml or 138 pmol/ml or

nM), but it can vary between 4 and 10 μ g/dl (40–60 ng/ml or 110–276 pmol/ml or nM) depending on the assay employed (16–18).

Various assay methods for determining plasma or serum cortisol levels are employed by different hospital and commercial laboratories. The two most commonly used techniques are a competitive protein binding asasy (PBA) and various radioimmunoassays (RIAs). The PBA is not entirely specific for cortisol, and RIAs vary in their specificity and sensitivity for cortisol and other steroids that are normally less prominent in human plasma. Both types of assay require care to obtain adequate precision and accuracy, especially at relatively low concentrations of cortisol (4-10 µg/dl), which are critical for use of the DST in psychiatry. Each laboratory should regularly standardize its procedures to maintain assay quality and to define the appropriate criterion level for cortisol. Recent studies testing commercially available RIA kits found that they yielded inconsistent assay values for the same sample and that even the same assay method could be inconsistent over time (16, 17). Because normal values are variable and because plasma cortisol concentrations close to 5 µg/dl are often not carefully standardized, test results between 4 and 7 µg/dl should be interpreted cautiously.

EXCLUSION CRITERIA

It is generally assumed that the DST, as used with psychiatric patients, is a test of dysfunction of central neuronal and neuroendocrine systems associated with major depression or melancholia probably involving the limbic system and hypothalamus. Although the details of this assumption remain to be clarified, it is clear that both as a pharmacological and physiological procedure, the DST can be influenced significantly by drugs or metabolic factors unrelated to depression. Ideally, patients should be drug free, physically healthy, and physiologically stable to ensure unambiguous interpretation of DST results. This ideal is not easily attained, and the prevalence of interfering conditions is higher than many clinicians realize. Drugs that accelerate the metabolism and plasma clearance of dexamethasone can cause false positive results, and their influence may take several weeks to subside after their intake is stopped. For example, valid DST results cannot be expected in depressed patients exposed to, or recently withdrawn from, nonbenzodiazepine sedatives or anticonvulsants that induce increased hepatic metabolism and clearance of dexamethasone (e.g., barbiturates, carbamazepine, phenytoin). Heavy use of, or recent withdrawal from, alcohol also interferes with the DST, perhaps for as long as several weeks. Many acute medical illnesses and some chronic conditions (such as diabetes mellitus) also have been associated with nonsuppression of cortisol in the DST. Appendix 1 lists conditions associated with spurious DST results.

SENSITIVITY

The sensitivity of a diagnostic test refers to the percentage of patients with the index disorder (in the case of the DST, major or melancholic depression) who have positive or abnormal test results. High sensitivity is desirable in all medical tests but is especially important for screening tests, which are used to detect treatable conditions in populations at risk. Nearly perfect sensitivity is required when the consequences of no treatment are death or serious morbidity (e.g., diabetes mellitus, leukemia, syphilis, tuberculosis). In reality, no test achieves such a level of performance, although blood glucose tests for diabetes, white blood cell count in leukemia, serological tests for syphilis, and skin tests for tuberculosis are examples of highly sensitive medical tests.

The sensitivity of the DST, as currently performed, is quite limited in major depressive illness or melancholia, so it is not appropriate as a screening test to locate such patients in a general population. Depending, in part, on the samples of patients tested and the test protocol followed, the sensitivity of the DST for major depression has been reported to vary from about 30% to 70% (7, 9, 10, 19-23). Hospitalized patients with severe melancholic depression, tested with two or three plasma samples after 1 mg of dexamethasone, typically have rates of nonsuppression of cortisol (positive DST) of about 50% to 60%, whereas outpatients with presumably less severe major depression and tested with only one plasma sample often have rates of nonsuppression of about 40% or even less (7, 9, 12, 20, 21, 23). Among patients meeting the current DSM-III clinical criteria for major depression, the presence or absence of melancholic features does not strongly or consistently affect DST sensitivity (24, 25). Patients with primary depression have been reported to have a somewhat higher rate of nonsuppression than some patients with both depression and another psychiatric diagnosis (4, 25). However, it is not clear that this difference in DST response generalizes to all cases of secondary depression. Several studies indicate that patients with acute psychotic affective disorders or mixed manic-depressive states have even higher rates of nonsuppression and higher absolute cortisol values than patients with major depression in general (20, 21, 25-33).

DST sensitivity varies predictably with the DST protocol. The most widely employed procedure uses 1.0 mg of oral dexamethasone. Studies comparing doses of 1.0 and 2.0 mg indicate that more patients escape from suppression of plasma cortisol at the lower dose (7, 9, 34). There is evidence that this gain in sensitivity is accompanied by a corresponding loss of specificity (more false positive results) in normal control subjects, especially if the dose of dexamethasone falls below 1.0 mg (35). When cortisol is measured at both 4:00 p.m. and 11:00 p.m., test sensitivity is increased about 20% over cortisol measurement at 4:00 p.m. alone (7). Since only about 25% of patients

who escape from suppression at 4:00 p.m. or 11:00 p.m. have abnormal test results at 8:00 a.m., use of the 8:00 a.m. sample alone reduces test sensitivity markedly (7). Adding a morning plasma sample adds little to the sensitivity obtained with two samples obtained in the afternoon and evening, but because morning cortisol concentrations usually are high in the absence of dexamethasone, a low level of cortisol in an 8:00 a.m. plasma sample may confirm that the dexamethasone was ingested. The cortisol concentration selected to define the DST outcome as abnormal also influences test sensitivity predictably. As the criterion for nonsuppression is decreased from a plasma cortisol concentration of 5 to 3 µg/dl, test sensitivity increases perhaps by 10% per unit of cortisol level (7, 26) but, again, with a corresponding loss of specificity.

Such technical differences between studies may account for some of the differences in reported sensitivity of the DST. However, test sensitivity in major or melancholic depression usually has not exceeded 50%-60%. Overall, with the use of 1.0 mg of dexamethasone, one to three plasma samples, and criterion values of about 5.0 µg/dl, the sensitivity of the DST in thousands of patients with major depression has averaged about 45% (7, 9, 12, 26, 30, 36, 37). Such moderate sensitivity, again, means that the DST is not well-suited for case finding or as a screening procedure to identify cases in a broad population. The next question is whether nonsuppression, when it does occur, can be interpreted with confidence, or as having a high degree of specificity, in a mixed sample of patients.

SPECIFICITY

The specificity of a diagnostic test is the chance of a negative finding when the person tested is free of the condition under study, and it represents the effect of the false positive rate on an ideal of 100% true negative outcome. High specificity is required when a technique is used as a definitive test to confirm a diagnosis with serious clinical implications, such as recommendation of a treatment associated with significant toxicity, discomfort, or expense. High specificity is also important when—as in the case of a fatal, severe, progressive, or disabling disease—establishing the diagnosis in itself creates distress or requires planning for future disability. On the basis of data from early studies showing apparently high specificity of the DST in healthy subjects, patients with nonendogenous depression, and patients with certain other psychiatric disorders, it was proposed as a confirmatory test for endogenous depression (3, 7). However, the specificity of the DST for major depression or melancholia is currently one of the most controversial issues related to its clinical use.

In seminal research by Carroll and colleagues (2, 3, 7) and early replications and extensions of that work (4, 19, 38, 39), specificity was reported to be over

90%. These comparisons of the frequency of escape from dexamethasone in patients with melancholic "endogenous" depression, patients with some other psychiatric diagnoses, and normal control subjects indicated less than 10% risk of a false positive DST. These results were offered as support for the DST as a confirmatory test for depression on the basis of the finding that, although a negative DST is not very informative, a positive test strongly suggests melancholia if appropriate exclusion criteria have been applied.

The specificity observed in diagnostic testing depends on the comparison sample evaluated. Most studies of the DST (involving hundreds of normal control subjects) using 1.0 mg of dexamethasone have resulted in rates of cortisol nonsuppression of about 5%-10% (12). However, a physician seldom is interested in distinguishing a patient with major affective disorder from a normal person, and the more germane clinical issue is the specificity of the test among patients with other psychiatric or medical illnesses that might be confused with major depression. Such conditions might include acute or chronic psychosis, various anxiety disorders, mixed bipolar disorder, dementia or other neuropsychiatric diseases, personality disorders, dysthymic disorder ("neurotic" depression), substance abuse or other intoxications, and metabolic disorders. As more recent reports have included a wider variety of clinical conditions, the DST has shown substantially lower specificity than found with normal control subjects (9, 10, 21, 36, 40, 41). Our review of a large number of studies that used 1.0 or 2.0 mg of dexamethasone indicates an overall specificity of about 80% among hundreds of psychiatric patients with a diagnosis other than major depressive disorder or melancholia.

DST-positive (cortisol nonsuppression) rates in some series of cases of mania (4, 26, 31, 41–45), dementia (46–51), and eating disorder (52, 53) were similar to those for major depression. Rates in patients with nonmajor depressions (dysthymic, minor, and neurotic depressions) have been intermediate between those in normal and melancholic patients (21, 37, 44). Relatively high specificity has been maintained in other groups, including schizophrenic patients (4, 7, 21, 26, 29, 31, 41, 42, 44, 54–56), patients with panic disorder and agoraphobia (57–59), individuals with grief reaction (60), and detoxified alcoholics (61, 62).

Substantial weight loss in the context of strict dieting or malnutrition as well as anorexia nervosa is so frequently associated with abnormal DST results as to indicate that severe or sustained weight loss might best be considered an exclusion criterion for the DST (7, 63). Some recent studies, on the other hand, have not found weight loss to be an important contributory factor in the outcome of the DST in depression (64, 65), and weight loss per se does not account for nonsuppression in most depressed patients. Exclusion should also extend to diabetics, even those under adequate treatment (66, 67), and to alcoholics within

several weeks of withdrawal (61, 62, 68–74) (appendix 1). In addition, the nonspecific effects of acute distress or "stress," including entry into a hospital or recent withdrawal of medication, may contribute to spuriously elevated plasma levels of cortisol and escape from suppression by dexamethasone (1, 40, 75, 76).

The importance of advanced age to the outcome of the DST remains unclear. There seems to be a greater likelihood of nonsuppression of cortisol in elderly depressed patients (7, 26), although this response usually returns to normal following recovery (77, 78). There is also some evidence that normal subjects over age 60 have impaired responses to dexamethasone at 0.5 mg (79, 80) but not at 1.0 mg (81–84).

One way to improve the utility of the DST is to remain skeptical and cautious about values of cortisol close to the criterion level (about 4–7 µg/dl) while giving serious attention to higher levels. That is, not only may the DST be used as a binary (positive/negative) test, but it may also, to some extent, have practical value as a continuous or semiquantitative test (response weakly, moderately, or strongly positive as cortisol level increases above the nominal criterion level).

Another measure of a diagnostic test's usefulness is its *predictive power* or value, or the "diagnostic confidence" (85–87). This measure of any medical testing procedure is of particular importance to the physician faced with the need to interpret a given test outcome. It is the chance of association of a positive test result with the index condition in question (or of a negative test with absence of the condition). The predictive power of a positive test reflects the sensitivity and specificity of the test but also depends importantly on the prevalence of the index illness in the population tested and is reduced when the index condition is infrequent (85, 86).

Erosion of specificity and diagnostic power with broadened clinical application is common in the development of most medical tests. Specificity is often determined first on the basis of a proposed test's performance in healthy control populations or, as in some studies of the DST, in normal subjects or patients with disorders that are less acute or less severe than the index disorder. As the comparison group expands, the specificity of a test commonly decreases. Common reasons are greater heterogeneity and less reliability in the clinical diagnoses, uncontrolled and poorly understood invalidating factors, and unanticipated variations among clinical laboratories. This result does not necessarily mean that the test has no clinical value, but it does call for caution in interpreting positive results from a test with limited sensitivity and specificity, especially when the likelihood of encountering a case of the index disorder is low. It is essential to place the test result in its appropriate context with all other available clinical information about an individual patient (14). Ultimately, the most important clinical determinant of the diagnostic power of a test is the nature of the comparison population. Relatively few false positive DSTs are found in samples of carefully screened healthy adults, patients with chronic nonpsychotic disorders, or even moderately stable chronic schizophrenic patients.

INITIAL DST RESPONSE AND OUTCOME OF ANTIDEPRESSANT TREATMENT

At least 17 studies have reported on the association between an initial DST result and subsequent response to antidepressant or electroconvulsive treatment in patients with major depressive disorders (9, 19, 23, 54, 88–100). An initial antidepressant response occurred in 82% of over 250 cortisol nonsuppressors and 74% of a similar number of suppressors (a nonsignificant difference). Eleven of the reports, for the most part, met the following criteria: 1) employed standardized diagnostic methods based on either Research Diagnostic Criteria (RDC) (eight reports) or DSM-III (three reports), 2) assessed clinical outcome by raters blind to DST results, 3) provided an adequate description of the cortisol assay method by PBA (four reports) or RIA (seven reports), 4) defined medical and pharmacological exclusion criteria (as in appendix 1) to avoid misleading DST results, 5) specified reasonable criteria for nonsuppression of postdexamethasone plasma cortisol (≥ 4 , 5, or 6 μ g/dl), 6) treated patients with an antidepressant at apparently adequate doses for at least 4 weeks, and 7) described clinical outcome criteria to define response to treatment (substantial change in scores on the Hamilton Rating Scale for Depression [eight reports] or Global Assessment Scale [three reports]). Finally, eight reports met all of the preceding selection criteria and furnished the number of patients with marked or complete response and those with a clinically unsatisfactory response to treatment (9, 89, 90, 93, 95–98).

These eight reports included a total of 319 subjects with an overall antidepressant response rate of 70% (N=224). The DST-positive patients responded at a rate of 76% (121 of 159), whereas the cortisol suppressors responded at a rate of 64% (103 of 160), indicating a small and insignificant difference of 11.7% (χ^2 =10.2, df=7, p=.15; Mantel-Haenszel chisquare analysis for pooled values [101]).

Taken together, these results suggest that the initial DST status does not powerfully or consistently supplement clinical methods of diagnosis of major depression for predicting short-term responses to adequate doses of tricyclic antidepressants or ECT (102). There is also little evidence based on direct comparisons that DST outcome predicts selective responsiveness to specific antidepressants or mood-stabilizing treatments. Monoamine oxidase inhibitors have not yet been evaluated adequately in this way.

The studies which have found that approximately 70% of both DST-positive and DST-negative (cortisol suppressor) patients respond to antidepressant treatment do not permit the rate of true drug response to be

distinguished from that of spontaneous remission. Recent observations suggest that the placebo response rate among DST-positive patients with major depression is much lower than that among DST-negative patients (103, 104). If this finding is confirmed, it would increase the real magnitude of the difference in treatment response between DST-positive and DSTnegative depressed patients. Another recent report suggests that DST-positive patients are less likely to respond to cognitive therapy than patients with normal DST results (105). Nevertheless, withholding antidepressant treatment or ECT merely on the basis of normal suppression of cortisol on the DST, given a patient with compelling or even probable clinical features of severe depression, would not be apprepriate. We suggest that clinicians should have a good reason for withholding antidepressants from a patient with a depressive disorder who has a technically valid abnormal DST result.

In view of these suggestive findings, more work should be done to evaluate the potential ut lity of supplementing clinical predictions of short-term response to specific treatments of major depression and other affective disorders by the initial DST response. In addition, the influence of other clinical variables, such as subtype and severity of depression, as well as past personal and family history, could be investigated systematically.

Also important would be studies of the abilit / of the DST to help predict response to thymoleptic treatment when the decision to treat is not clinically obvious. Pertinent cases would include those without c'ear-cut melancholic or endogenous features and those in which neurological or medical conditions or psychiatric conditions other than depression are present. Examples are borderline personality disorder with depressive features, dysthymic disorder (106), atypical depression, cyclothymic disorder, and cases ir which depression or depressive features coexist with medical or neurological conditions, such as multiple sclerosis, mild dementia, chronic pain, or stroke (107–109). To our knowledge, systematic prospective studie; of responses of such patients to antidepressant or placebo treatment, with the DST as a predictor of outcome, have not been reported.

RELAPSE AS A FUNCTION OF DISCHARGE DST STATUS

A total of 10 reports of uncontrolled observations and case reports provided preliminary data pertinent to the question of whether conversion from cortisol nonsuppression to suppression, versus persistence or early recurrence of a nonsuppressing response on the DST, would correspond with, or predict, clinical outcome in severe depression (92, 100, 110–117). Of these 10 reports, seven allowed statistical review (92, 100, 112–114, 116, 117). All 111 depressed patients studied in these reports were DST positive at initial

assessment. Of these, 70 (63%) later became DST negative during treatment for their depression or at follow-up, and 41 (37%) continued not to suppress cortisol even after apparently adequate clinical response to treatment. The time of follow-up varied from several weeks to 6 months, and the criteria for clinical worsening varied among the reports. Of the total 111 patients, 44 (40%) clinically relapsed or became suicidal during follow-up. Because many of the studies involve relatively small numbers (median=8) of apparently incidental or retrospective case reports, it is difficult to know whether the relatively high overall rate of short-term relapse (40%) is an artifact of selection bias or inadequate treatment or if it reflects a valid and clinically important characteristic of prolonged nonsuppression of cortisol.

Among depressed patients whose DST results normalized, only 17% (12 of 70) had a poor clinical outcome. In contrast, 78% (32 of 41) who persisted as, or again became, cortisol nonsuppressors were found to have a poor clinical outcome, with recrudescence of symptoms, rehospitalization, and attempted or completed suicides. This fourfold difference in the rate of poor clinical outcome among depressed subjects with persistent nonsuppression of cortisol (versus normalization of DST results) is highly significant statistically (by Mantel-Haenszel chi-square analysis for pooled data [101]). It suggests that nonnormalization may be a poor prognostic sign. This highly relevant potential clinical application of the DST requires further investigation.

To test the possibility of an association between DST status and prognosis more adequately, prospective studies with clear diagnostic criteria for inclusion of patients and for assessing clinical outcome, as well as controlled and extended periods of follow-up, are needed. An adequate study of this question would require cohorts derived from an initial pool of more than 100 depressed patients followed for many months and so would not be easy to carry out. Certainly, sustained normal suppression in the DST does not justify lax and overconfident follow-up of potentially suicidal patients or those at high risk of relapse for other reasons.

COMMENTARY

The DST has contributed importantly to a valuable current ferment in psychiatry. In attempts to clarify and strengthen diagnostic concepts, many new biological testing strategies are being explored. In addition, the neurophysiology underlying dexamethasone suppression is being more carefully examined. The influence on the DST of such factors as extreme age, weight loss, sleep deprivation, and current stress are being evaluated. The pharmacokinetics of dexamethasone also may play a role, as there are recent suggestions that nonsuppression of cortisol may be associated with lower dexamethasone plasma levels (40, 118–121).

Plasma dexamethasone levels account for an uncertain number of abnormal test results in both depressed subjects and control subjects. Future research should include measures of plasma dexamethasone to control for this source of variability.

The DST is distinctly limited in sensitivity for major depression (averaging about 45% in several thousand cases), although rates of nonsuppression may increase with age, perhaps with a family history of depression, and possibly with severity of depression or the presence of psychotic or mixed manic-depressive features. Given this limited sensitivity, a negative test outcome has little clinical significance, but overinterpretation of negative test results could have serious clinical consequences, such as undertreatment and inadequate clinical follow-up. A normal DST result does not rule out a diagnosis of major affective disorder, and it does not imply that antidepressant or mood-stabilizing treatment or ECT is inappropriate.

The high specificity of the DST in normal or some selected nonpsychiatric control subjects (over 90%) is less evident in patients with nonmajor affective disorder (70%-80%) and is much less well-maintained in patients with other severe and acute psychiatric disorders, such as mania and acute psychoses (50%-65% specificity) or dementia (about 60% specificity). Thus, as a test to aid diagnosis in many difficult yet clinically pertinent situations, the DST appears to have limited power. Although further critical studies are required, there are suggestions that the DST may have differentiating ability in certain other important comparisons, such as in evaluating some cases of pharmacologically treatable secondary depression (e.g., in chronic pain patients, demoralized detoxified alcoholics, stroke patients, and patients with anxiety disorders). The DST certainly is not a screening test and is most likely to be of value when the probability of melancholia or another major affective diagnosis is moderately high.

There is no significant difference in response rate to antidepressant drug treatment between patients with major depression who show nonsuppression on the DST and those with a normal test result. There is also no proven association between DST result and response to a specific type of antidepressant. There are reports that the rate of beneficial responses to an inactive placebo treatment is higher in DST-negative than DST-positive depressed patients. But, as stated several times, a normal DST result by itself does not imply that antidepressant treatment or ECT should be withheld.

DST results may normalize early, even without substantial clinical improvement in depression. This finding and the high rate of cortisol nonsuppression immediately after hospitalization or soon after withdrawal of medications or alcohol, as well as the contrast in rates of nonsuppression between acute and chronic psychoses, all raise questions about the role of acute stress in DST responses. Special caution must be taken to avoid clinical decisions based on DST responses immediately after hospitalization or in pa-

tients who use, or who have recently discontinued using, alcohol or other drugs of abuse.

Studies of the potential utility of the DST in predicting relapse are limited by small numbers and possibly by ascertainment biases, but they suggest a high risk of poor outcome or suicide within several months among depressed patients who have remained or have again become DST positive after an apparently adequate initial clinical response to treatment. Although these suggestive data need further controlled assessment, they are strong enough to warrant careful follow-up of patients with persistent elevations of postdexamethasone cortisol levels even with apparent clinical remission.

CONCLUSIONS

The DST is one of the first laboratory tests in psychiatry and, as such, represents a significant advance. Such tests hold the promise of more meaningful diagnostic classification, more efficient treatment selection, and more accurate prognostication. However, like many laboratory tests in clinical medicine, the DST does less than one might hope, and it places serious burdens on physicians to recognize its limitations. Due to the limited sensitivity of the DST, the task force concludes that the usefulness of the test is not high when a patient is either very likely or very unlikely to have a major affective disorder. When a patient's clinical condition strongly suggests a major affective disorder, a positive DST result is reassuring and confirmatory. It may not alter the choice of treatment, but it may encourage some patients to accept recommended somatic treatments. A negative test outcome should not discourage a trial of somatic treatment if other clinical findings support a decision to treat. In a screening situation, such as in a general medical clinic, a positive test is likely to be a false positive result rather than a reflection of the presence of major affective disorder because of possible artifacts related to medical illness and to a low prevalence of major affective disorder. A positive DST result may reinforce a diagnosis of major affective disorder in certain ambiguous situations, such as in distinguishing psychotic affective disorders from acute exacerbations of a schizophrenic illness. Patients who have abnormal test results after apparent clinical improvement may be at risk of clinical worsening in the near future and warrant particularly careful follow-up or aftercare. Beyond these suggestions, the task force found no incontrovertible role for the DST in current clinical practice and does not recommend inclusion of the DST in quality assurance assessment of the treatment of patients with affective or other psychiatric disorders.

We urge the psychiatric community neither to accept the DST uncritically for clinical application nor to discard it at this time. Tests such as the DST require extensive and careful evaluation. Experience with the DST to date encourages further research with this test and a search for other practical biological measures to validate psychiatric diagnoses and to predict treatment response and clinical course. "The DST is a promising beginning in psychiatry . . . , but one must expect and hope that better tests eventually will replace it" (14). In the meantime, clinicians who use the DST should be fully conversant with the issues discussed in this report.

REFERENCES

- 1. Crapo L: Cushing's syndrome: a review of diagnostic tests. Metabolism 1979; 28:955–977
- Carroll BJ, Curtis GC, Mendels J: Neuroendocrine egulation in depression, I: limbic system-adrenocortical dystunction. Arch Gen Psychiatry 1976; 33:1039–1044
- 3. Carroll BJ, Curtis GC, Mendels J: Neuroendocrine egulation in depression, II: discrimination of depressed from nonde pressed patients. Arch Gen Psychiatry 1976; 33:10:1-1058
- pressed patients. Arch Gen Psychiatry 1976; 33:10:1-1058
 4. Schlesser MA, Winokur G, Sherman BM: Hypothalamic-pituitary-adrenal axis activity in depressive illness: it relationship to classification. Arch Gen Psychiatry 1980; 37:737-743
- 5. Gibbons JL, McHugh PR: Plasma cortisol in depress ve illness. J Psychiatr Res 1962; 1:162–171
- Stokes PE, Pick GR, Stoll PM, et al: Pituitary-adrenal function in depressed patients: resistance to dexamethasone suppression. J Psychiatr Res 1975; 12:271-281
- Carroll BJ, Feinberg M, Greden JF, et al: A specific aboratory test for the diagnosis of melancholia: standardization, validation, and clinical utility. Arch Gen Psychiatry 1981; 38:15–22.
- 8. Carroll BJ: The dexamethasone suppression test for nelancholia. Br J Psychiatry 1982; 140:292–304
- Green HS, Kane JM: The dexamethasone suppress on test in depression. Clin Neuropharmacol 1983; 6:7-24
 Insel TR, Goodwin FK: The dexamethasone suppression test:
- Insel TR, Goodwin FK: The dexamethasone suppression test: promises and problems of diagnostic laboratory tests in psychiatry. Hosp Community Psychiatry 1983; 34:1131-1138
- Shapiro MF, Lehman AF, Greenfield S: Biases in the laboratory diagnosis of depression in medical practice. Arch Intern Med 1983; 143:2085–2088
- 12. Arana GW, Baldessarini RJ, Ornsteen M: The dexa nethasone suppression test for diagnosis and prognosis in psychiatry: commentary and review. Arch Gen Psychiatry 1985; 42: 1193–1204
- 13. Baldessarini RJ, Arana GW: Does the dexamethasor c suppression test have clinical utility in psychiatry? J Clin Psychiatry 1985; 46 (2, part 2):25-29
- 14. Carroll BJ: Dexamethasone suppression test: a review of contemporary confusion. J Clin Psychiatry 1985; 4:6 (2, part 2):13-24
- 15. Braddock L: The dexamethasone suppression test: fact and artefact. Br J Psychiatry 1986; 148:363-374
- Meltzer HY, Fang VS: Cortisol determination and the dexamethasone suppression test: a review. Arch Gen Psychiatry 1983; 40:501-505
- 17. Ritchie JC, Carroll BJ, Olton PR, et al: Plasma cortisol determination for the dexamethasone suppression test: comparison of competitive protein-binding and commercial radioimmunoassay methods. Arch Gen Psychiatry 1985; 42:493-497
- 18. Aggernaes H, Kirkegaard C, Krog-Meyer I, et al: Dexamethasone suppression test and TRH test in endogencus depression. Acta Psychiatr Scand 1983; 67:258-264
- 19. Brown WA, Johnston R, Mayfield D: The 24-hour dexamethasone suppression test in a clinical setting: relationship to diagnosis, symptoms, and response to treatment. Am J Psychiatry 1979; 136:543-547
- 20. Evans DL, Nemeroff CB: Use of the dexamethasone suppression test using DSM-III criteria on an inpatient osychiatric unit. Biol Psychiatry 1983; 18:505-511
- 21. Nelson WH, Khan A, Orr WW Jr, et al: The dexemethasone

- suppression test: interaction of diagnosis, sex, and age in psychiatric inpatients. Biol Psychiatry 1984; 19:1293–1304
- Extein I, Rosenberg G, Pottash ALC, et al: The dexamethasone suppression test in depressed adolescents. Am J Psychiatry 1982; 139:1617–1619
- Peselow ED, Fieve RR: Dexamethasone suppression test and response to antidepressants in depressed outpatients. N Engl J Med 1982; 307:1216–1217
- Davidson J, Lipper S, Zung WWK, et al: Validation of four definitions of melancholia by the dexamethasone suppression test. Am J Psychiatry 1984; 141:1220–1223
- Coryell W, Gaffney G, Burkhardt PE: DSM-III melancholia and the primary-secondary distinction: a comparison of concurrent validity by means of the dexamethasone suppression test. Am J Psychiatry 1982; 139:120–122
- Stokes PE, Stoll PM, Koslow SH, et al: Pretreatment DST and hypothalamic-pituitary-adrenocortical function in depressed patients and comparison groups: a multicenter study. Arch Gen Psychiatry 1984; 41:257-267
- Asnis GM, Halbreich U, Nathan RS, et al: The dexamethasone suppression test in depressive illness: clinical correlates. Psychoneuroendocrinology 1982; 7:295–301
- 28. Mendlewicz J, Charles G, Franckson JM: The dexamethasone suppression test in affective disorder: relationship to clinical and genetic subgroups. Br J Psychiatry 1982; 141:464–470
- Rothschild AJ, Schatzberg AF, Rosenbaum AH, et al: The dexamethasone suppression test as a discriminator among subtypes of psychotic patients. Br J Psychiatry 1982; 141:471– 474
- Rudorfer MV, Hwu H-G, Clayton PJ: Dexamethasone suppression test in primary depression: significance of family history and psychosis. Biol Psychiatry 1982; 17:41–48
- Arana GW, Barreira PJ, Cohen BM, et al: The dexamethasone suppression test in psychotic disorders. Am J Psychiatry 1983; 140:1521–1523
- 32. Evans DL, Nemeroff CB: The dexamethasone suppression test in mixed bipolar disorder. Am J Psychiatry 1983; 140:615-617
- Krishnan RR, Maltbie AA, Davidson JRT: Abnormal cortisol suppression in bipolar patients with simultaneous manic and depressive symptoms. Am J Psychiatry 1983; 140:203–205
- Brown WA, Daamen M, D'Agostino C, et al: Cortisol level response to 1- and 2-mg doses of dexamethasone. Am J Psychiatry 1983; 140:609-611
- 35. Rush AJ, Schlesser MA, Giles DE, et al: The effect of dosage on the dexamethasone suppression test in normal controls. Psychiatry Res 1982; 7:277–285
- 36. Holsboer F, Klein H, Bender W: Hypothalamic-pituitary-adrenal activity in a group of 100 heterogenic depressed patients: diagnostic validity and biochemical aspects of the cortisol response to dexamethasone suppression. Prog Neuro-psychopharmacol (Suppl) 1980; 180:abstract 927
- 37. Abou-Saleh MT, Milln P, Coppen A: Dexamethasone suppression test in depression. Neuropharmacology 1983; 22:549-550
- Nuller JL, Ostroumova MN: Resistance to inhibiting effect of dexamethasone in patients with endogenous depression. Acta Psychiatr Scand 1980; 61:169–177
- 39. Rush AJ, Giles DE, Roffwarg HP, et al: Sleep EEG and dexamethasone suppression test findings in outpatients with unipolar major depressive disorders. Biol Psychiatry 1982; 17: 327–341
- Berger M, Pirke K-M, Doerr P, et al: The limited utility of the dexamethasone suppression test for the diagnostic process in psychiatry. Br J Psychiatry 1984; 145:372–382
- Keitner GI, Haier RJ, Qualls CB, et al: Diagnostic heterogeneity and the DST in consecutive psychiatric admissions. Psychiatry Res 1985; 14:215–223
- Charles G, Vandewalle J, Meunier JC, et al: Plasma and urinary cortisol levels after dexamethasone in affective disorders. J Affective Disord 1981; 3:397

 –406
- 43. Graham PM, Booth J, Boranga G, et al: The dexamethasone suppression test in mania. J Affective Disord 1982; 4:201–211

- Coccaro EF, Prudic J, Rothpearl A, et al: Clinical utilization of the dexamethasone suppression test. J Clin Psychiatry 1984; 45:382–384
- 45. Godwin CD, Greenberg LB, Shukla S: Consistent dexamethasone suppression test results with mania and depression in bipolar illness. Am J Psychiatry 1984; 141:1263–1265
- 46. Carnes M, Smith JC, Kalin NH, et al: The dexamethasone suppression test in demented outpatients with and without depression. Psychiatry Res 1983; 9:337–344
- Raskind M, Peskind E, Rivard M-F, et al: Dexamethasone suppression test and cortisol circadian rhythm in primary degenerative dementia. Am J Psychiatry 1982; 139:1468– 1471
- Spar JE, Gerner R: Does the dexamethasone suppression test distinguish dementia from depression? Am J Psychiatry 1982; 139:238–240
- Balldin J, Gottfries C-G, Karlsson I, et al: Dexamethasone suppression test and serum prolactin in dementia disorders. Br J Psychiatry 1983; 143:277-281
- Castro P, Lemaire M, Toscano-Aguilar M, et al: Depression, dementia, and the dexamethasone suppression test (letter). Am J Psychiatry 1983; 140:1386
- 51. Jenike MA, Albert MS: The dexamethasone suppression test in patients with presenile and senile dementia of the Alzheimer's type. J Am Geriatr Soc 1984; 32:441-444
- 52. Hudson JI, Pope HG Jr, Jonas JM, et al: Hypothalamicpituitary-adrenal-axis hyperactivity in bulimia. Psychiatry Res 1983; 8:111-117
- 53. Kiriike N, Nishiwaki S, Izumiya Y, et al: Dexamethasone suppression test in bulimia. Biol Psychiatry 1986; 21:328–332
- 54. Brown WA, Qualls CB: Pituitary-adrenal disinhibition in depression: marker of a subtype with characteristic clinical features and response to treatment? Psychiatry Res 1981; 4: 115-128
- Dewan MJ, Pandurangi AK, Boucher ML, et al: Abnormal dexamethasone suppression test results in chronic schizophrenic patients. Am J Psychiatry 1982; 139:1501–1503
- Sawyer J, Jeffries JJ: The dexamethasone suppression test in schizophrenia. J Clin Psychiatry 1984; 45:399

 –402
- Curtis GC, Cameron OG, Nesse RM: The dexamethasone suppression test in panic disorder and agoraphobia. Am J Psychiatry 1982; 139:1043–1046
- Lieberman JA, Brenner R, Lesser M, et al: Dexamethasone suppression tests in patients with panic disorder. Am J Psychiatry 1983; 140:917-919
- Sheehan DV, Claycomb JB, Surman OS, et al: Panic attacks and the dexamethasone suppression test. Am J Psychiatry 1983; 140:1063–1064
- 60. Das M, Berrios GE: Dexamethasone suppression test in acute grief reaction. Acta Psychiatr Scand 1984; 70:278-281
- 61. Ravi SD, Dorus W, Park YN, et al: The dexamethasone suppression test and depressive symptoms in early and late withdrawal from alcohol. Am J Psychiatry 1984; 141:1445–1448
- Khan A, Ciraulo DA, Nelson WH, et al: Dexamethasone suppression test in recently detoxified alcoholics: clinical implications. J Clin Psychopharmacology 1984; 4:94

 97
- 63. Berger M, Pirke K-M, Doerr P, et al: Influence of weight loss on the dexamethasone suppression test. Arch Gen Psychiatry 1983; 40:585-586
- 64. Keitner GI, Brown WA, Qualls CB, et al: Results of the dexamethasone suppression test in psychiatric patients with and without weight loss. Am J Psychiatry 1985; 142:246–248
- Krishnan KRR, France RD, Snipes MT, et al: Weight change and the dexamethasone suppression test. Biol Psychiatry 1985; 20:1018–1022
- Cameron OG, Kronfol Z, Greden JF, et al: Hypothalamicpituitary-adrenocortical activity in patients with diabetes mellitus. Arch Gen Psychiatry 1984; 41:1090–1095
- 67. Hudson JI, Hudson MS, Rothschild AJ, et al: Abnormal results of the dexamethasone suppression tests in nondepressed patients with diabetes mellitus. Arch Gen Psychiatry 1984; 41: 1086–1089

- Swartz CM, Dunner FJ: Dexamethasone suppression testing of alcoholics. Arch Gen Psychiatry 1982; 39:1309–1312
- Targum SD, Wheadon DE, Chastek CT, et al: Dysregulation of hypothalamic-pituitary-adrenal axis function in depressed alcoholic patients. J Affective Disord 1982; 4:347–353
- Kroll P, Palmer C, Greden JF: The dexamethasone suppression test in patients with alcoholism. Biol Psychiatry 1983; 18: 441–450
- 71. Newsom G, Murray N: Reversal of dexamethasone suppression test nonsuppression in alcohol abusers. Am J Psychiatry 1983; 140:353–354
- 72. Dackis CA, Bailey J, Pottash ALC, et al: Specificity of the DST and the TRH test for major depression in alcoholics. Am J Psychiatry 1984; 141:680-683
- Targum SD, Capodanno AE, Unger S, et al: Abnormal dexamethasone tests in withdrawing alcoholic patients. Biol Psychiatry 1984; 19:401–405
- Del Porto JA, Monteiro MG, Laranjeira RR, et al: Reversal of abnormal dexamethasone suppression test in alcoholics abstinent for four weeks. Biol Psychiatry 1985; 20:1156–1160
- Ceulemans DLS, Westenberg HGM, van Praag HM: The effect of stress on the dexamethasone suppression test. Psychiatry Res 1985; 14:189–195
- 76. Baumgartner A, Graf K-J, Kurten I: The dexamethasone suppression test in depression, in schizophrenia, and during experimental stress. Biol Psychiatry 1985; 20:675–679
- Asnis GM, Sachar EJ, Halbreich U, et al: Cortisol secretion in relation to age in major depression. Psychosom Med 1981; 43: 235–242
- Davis KL, Davis BM, Mathé AA, et al: Age and the dexamethasone suppression test in depression. Am J Psychiatry 1984; 141:872–874
- 79. Oxenkrug GF, Pomara N, McIntyre IM, et al: Aging and cortisol resistance to suppression by dexamethasone: a positive correlation. Psychiatry Res 1983; 10:125–130
- Branconnier RJ, Oxenkrug GF, McIntyre I, et al: Prediction of serum cortisol response to dexamethasone in normal volunteers: a multivariate approach. Psychopharmacology 1984; 84:274–275
- 81. Tourigny-Rivard M, Raskind M, Rivard D: The dexamethasone suppression test in an elderly population. Biol Psychiatry 1981; 16:1177–1184
- 82. Rosenbaum AH, Schatzberg AF, MacLaughlin RA, et al: The dexamethasone suppression test in normal control subjects: comparison of two assays and effect of age. Am J Psychiatry 1984; 141:1550–1555
- Targum SD: Neuroendocrine function in an ambulatory elderly population, in Proceedings of the 41st Annual Meeting, Society of Biological Psychiatry, 1986. Los Angeles, SBP, 1986
- 84. Tiongco DD, Hariharan M, Haskett RF, et al: Age effects on HPA regulation and dexamethasone plasma levels in normal subjects. Ibid
- 85. Carroll BJ: Biostatistical principles of laboratory diagnostic test development. Psychopharmacol Bull 1980; 16:38–40
- Baldessarini RJ, Finklestein S, Arana GW: The predictive power of diagnostic tests and the effect of prevalence of illness. Arch Gen Psychiatry 1983; 40:569–573
- 87. Sox HC Jr: Probability theory in the use of diagnostic tests: an introduction to critical study of the literature. Ann Intern Med 1986; 104:60-66
- 88. Extein I, Kirstein LS, Pottash ALC, et al: The dexamethasone suppression and thyrotropin-releasing hormone tests and response to treatment in unipolar depression. Int J Psychiatry Med 1982–1983; 12:267–274
- 89. Greden JF, Gardner R, King D, et al: Dexamethasone suppression tests in antidepressant treatment of melancholia: the process of normalization and test-retest reproducibility. Arch Gen Psychiatry 1983; 40:493–500

- 90. Brown WA, Shuey I: Response to dexamethasone and subtype of depression. Arch Gen Psychiatry 1980; 37:747–751
- Gold MS, Pottash ALC, Extein I, et al: Dexamethasone suppression tests in depression and response to treatment (letter). Lancet 1980; 1:1190
- 92. Goldberg IK: Dexamethasone suppression test as indicator of safe withdrawal of antidepressant therapy (letter). Lancet 1980; 1:376
- Coryell W: Hypothalamic-pituitary-adrenal axis abnormality and ECT response. Psychiatry Res 1982; 6:283–291
- 94. Nelson WH, Orr WW Jr, Stevenson JM, et al: Hypothalamicpituitary-adrenal axis activity and tricyclic response in major depression. Arch Gen Psychiatry 1982; 39:1033–1036
- Schlesser MA, Rush JA: DST status in relation to desipramine response, in Proceedings of the 37th Annual Meeting, Society of Biological Psychiatry, 1982. Los Angeles, SBP, 1982
- 96. Amsterdam JD, Winokur A, Bryant S, et al: The devamethasone suppression test as a predictor of antidepressant response. Psychopharmacology 1983; 80:43–45
- 97. Ettigi PG, Hayes PE, Narasimhachari N, et al: d-Amphetamine response and dexamethasone suppression test as predictors of treatment outcome in unipolar depression. Biol Psychiatry 1983; 18:499–504
- 98. Fraser AR: Choice of antidepressant based on the dexamethasone suppression test. Am J Psychiatry 1983; 140:786–787
- 99. Spar JE, La Rue A: Major depression in the elderly: DSM-III criteria and the dexamethasone suppression test as predictors of treatment response. Am J Psychiatry 1983; 140:844-847
- Yerevanian BI, Olafsdottir H, Milanese E, et al: Normalization of the dexamethasone suppression test at discharge from hospital: its prognostic value. J Affective Disord 1983; 5:191

 197
- Mantel N, Haenszel W: Statistical aspects of the analysis of data from retrospective studies of disease. J Natl Cancer Inst 1959; 22:719-748
- 102. Gitlin MJ, Gerner RH: The dexamethasone suppression test and response to somatic treatment: a review. J Clin Psychiatry 1986; 47:16–21
- Brown WA, Shrivastava R, Arato M: Pretreatment pituitaryadrenocortical status and placebo response in depression. Psychopharmacol Bull 1987; 23:155–159
- 104. Peselow ED, Stanley M, Fieve RR: Plasma cortisol and clinical response to antidepressants and placebo in depressed outpatients, in Proceedings of the Annual Meeting of the American College of Neuropsychopharmacology, 1985. Nashville, Tenn, ACN, 1985
- 105. Rush AJ: A phase II study of cognitive therapy of depression, in Psychotherapy Research. Edited by Williams JBW, Spitzer RL. New York, Guilford Press, 1984
- Rihmer Z, Szadoczky E, Arato M: Dexamethasone suppression test in masked depression. J Affective Disord 1983; 5: 293-296
- 107. Finklestein S, Benowitz LI, Baldessarini RJ, et al: Mood, vegetative disturbance, and dexamethasone suppression test after stroke. Ann Neurol 1982; 12:463–468
- 108. Lipsey JR, Robinson RG, Pearlson GD, et al: The dexamethasone suppression test and mood following stroke. Am J Psychiatry 1985; 142:318–323
- Reding M, Orto L, Willensky P, et al: The dexemethasone suppression test: an indicator of depression in stroke but not a predictor of rehabilitation outcome. Arch Neurology 1985; 42:209-212
- Amsterdam JD, Winokur A, Caroff S: Dexamethasone suppression test as a prognostic tool: two case reports. Am J Psychiatry 1981; 138:979-980
- Albala AA, Greden JF: Serial dexamethasone suppression tests in affective disorders (letter). Am J Psychiatry 1983; 137:383
- Greden JF, Albala AA, Haskett RF, et al: Normalization of dexamethasone suppression test: a laboratory index of recov-

- ery from endogenous depression. Biol Psychiatry 1980; 15: 449-458
- 113. Papakostas Y, Fink M, Lee J, et al: Neuroendocrine measures in psychiatric patients: course and outcome with ECT. Psychiatry Res 1981; 4:55–64
- 114. Coryell W, Zimmerman M: The dexamethasone suppression test and ECT outcome: a six-month follow-up. Biol Psychiatry 1983; 18:21–27
- 115. Holsboer F, Steiger A, Maier W: Four cases of reversion to abnormal dexamethasone suppression test response as indicator of clinical relapse: a preliminary report. Biol Psychiatry 1983; 18:911–916
- Nemeroff CB, Evans DL: Correlation between the dexamethasone suppression test in depressed patients and clinical response. Am J Psychiatry 1984; 141:247–249
- 117. Targum SD: Persistent neuroendocrine dysregulation in major depressive disorder: a marker for early relapse. Biol Psychiatry 1984; 19:305-318
- 118. Arana GW, Workman RJ, Baldessarini RJ: Association between low plasma levels of dexamethasone and elevated levels of cortisol in psychiatric patients given dexamethasone. Am J Psychiatry 1984; 141:1619–1620
- Holsboer F, Haack D, Gerken A, et al: Plasma dexamethasone concentrations and differential suppression response of cortisol and corticosterone in dépressives and controls. Biol Psychiatry 1984; 19:281–291
- Johnson GF, Hunt G, Kerr K, et al: Dexamethasone suppression test (DST) and plasma dexamethasone levels in depressed patients. Psychiatry Res 1984; 13:305-313
- 121. Morris H, Carr V, Gilliland J, et al: Dexamethasone concentrations and the dexamethasone suppression test in psychiatric disorders. Br J Psychiatry 1986; 148:66–69

APPENDIX 1. Factors That Can Interfere With DST Results

False Positive Result

Drugs: barbiturates, carbamazepine, phenytoin; glutethimide, meprobamate, methaqualone, methyprylon; reserpine^a; alcoholism; recent withdrawal of alcohol (about 3–4 weeks), antidepressants, or other drugs.^a

Endocrine abnormalities: Cushing's syndrome; pregnancy or high doses of estrogens; diabetes mellitus (even when well controlled); hypercalcemia; hypothyroidism.^a

Medical conditions: major medical disorders, such as infections, uncontrolled cardiac failure or hypertension, advanced renal or hepatic disease, cancer; fever, dehydration, nausea, vomiting; low body weight (anorexia nervosa, malnutrition), recent or ongoing weight loss (rigid dieting).

Other factors: rapid metabolism of dexamethasone; ECT (on postdexamethasone day), a grand mal seizures (on postdexamethasone day), temporal lobe disease; brain tumora; dementia; stress of hospitalizationa; circadian phase advance (e.g., shift workers, airline travelers).

False Negative Result

Drugs: synthetic corticosteroids, indomethacin, a isoniazid, methylphenidate, high doses of benzodiazepines, tricyclic antidepressants, L-tryptophan.

Endocrine abnormalities: hypopituitarism, Addison's disease; slow metabolism of dexamethasone.

^aSuspected but not proved.

Clinical Implications of Adult Developmental Theory

Calvin A. Colarusso, M.D., and Robert A. Nemiroff, M.D.

Multidisciplinary studies of adulthood have revolutionized thinking about developmental processes during the second half of life. These ideas are just beginning to be integrated with clinical theory and practice. The elaboration of the interface between the rapidly expanding developmental theory of normal adulthood and clinical intervention with older patients is a psychiatric frontier. Illustrating with clinical examples, the authors offer a rationale for using new diagnostic tools, suggest a revision of the theory of transference to include sources beyond childhood, and describe unique transference paradigms in older patients as well as equally phase-specific countertransference responses in their therapists.

(Am J Psychiatry 1987; 144:1263-1270)

In the last decade, the investigation of normal developmental processes in the adult has emerged as a distinct field of study. Building on the pioneer efforts of Freud (1, 2), Van Gennep (3), Jung (4), and Erikson (5), such recent investigators as Gould (6), Guttman (7), Levinson et al. (8), Neugarten (9), Pollock (10), Vaillant (11), and ourselves (12, 13) have begun a multidisciplinary effort intended to raise understanding of the second half of the life cycle to the sophisticated theoretical level at which understanding of childhood exists. In this paper we focus on the implications of adult developmental theory for the psychiatric diagnosis and treatment of adults. Our goal is to explore the most current thinking on the issues as stated by Roy Lowenstein, M.D., in his introduction to a conference on adult development in October 1985 (personal communication):

I find that frequently people either have already a firm grasp or at least an interest in the theoretical conceptualizations of adulthood, but that when we begin to discuss clinical implications, i.e., what happens between two adults in the consulting room, the subject either changes completely or it veers off inexorably into a discussion of the infantile, be it oedipal or pre-oedipal. In trying to

understand this phenomenon I have wondered whether the more somber aspects of this [adult] developmental phase in which we all are engaged have a frightening effect on us and cause us to switch the subject. Moreover, I have wondered if there is some sort of a conceptual dissolution that takes place when we attempt to translate adult developmental theory into clinical practice. It appears easily subsumed under other issues such as infantile development, the adult reworking of infantile issues, the real relationship, the extra-analytic life of the patient, and so on.

What needs to be done is to relate new ideas and data emerging from multidisciplinary adult developmental studies to actual work with patients.

Freud (14) was pessimistic about the treatment of older patients. "Near or about the fifties," he wrote, "the elasticity of the mental process, on which the treatment depends, is as a rule lacking—old people are no longer educable" (p. 264). Even if the elasticity were present, "the mass of material to be dealt with would prolong the duration of the treatment indefinitely" (p. 264). Further, such an analysis might not be cost-effective, because the patient would only have a short time in which to enjoy his or her newfound health. Other early analysts such as Abraham (15) and Jelliffe (16) conducted successful therapies with older patients and were optimistic about treating this age group. The struggle between the two divergent views may be observed in the literature across the decades: cautious, supportive intervention described by Fenichel (17), Hollender (18), and Wayne (19) versus insight-oriented techniques suggested by Kaufman (20), Segal (21), Jacques (22), King (23), and Pollock (24).

The skepticism has a much broader base than Freud's negativism. Butler and Lewis (25) related avoidance of older patients by therapists to the following six factors: 1) aged patients' stimulation of therapists' fears about their own old age, 2) conflicts about parental relationships mirrored in work with patients of the same age as the therapist's parents, 3) anticipated therapeutic impotence stemming from a belief in the ubiquity of untreatable organic states in the elderly, 4) a wish to avoid "wasting" therapeutic time and skills on older individuals (Freud's cost-effectiveness argument), 5) fears that the patient may die during treatment, and 6) a desire to avoid colleagues' negative comments about efforts directed toward the elderly.

Countertransference reactions may be the most im-

Copyright © 1987 American Psychiatric Association.

Received March 21, 1986; revised Sept. 18, 1986; accepted Nov. 3, 1986. From the Department of Psychiatry, University of California at San Diego. Address reprint requests to Dr. Colarusso, 1020 Prospect St., Suite 415A, La Jolla, CA 92037.

portant factor behind the avoidance of dynamic interaction for reasons presented clearly by Rechtschaffen (26): "The anxiety aroused by hostility toward a parent figure may lead to a watering down of the therapeutic process and to an exaggerated emphasis on supportive and covering-up procedures. Defending against anxiety, a therapist may propose only the most benign interpretations, and may assume an attitude of reverence toward an older patient that is out of keeping with the patient's actual readiness to examine himself." In contrast, our experience and that of colleagues has led us to believe that psychotherapy and psychoanalysis are valid, valuable forms of therapeutic intervention for many selected older patients, regardless of age.

The relative absence of clinical theory and case reports on the treatment of older patients led us in 1985 to publish The Race Against Time: Psychotherapy and Psychoanalysis in the Second Half of Life (13). The belief, expressed in that volume, that dynamic therapies are suitable, even preferred, forms of treatment for older patients is a point of view that is just emerging in the literature. For example, in 1983 the Journal of Geriatric Psychiatry devoted an entire issue to the question of psychotherapy of the elderly. In the introduction, Berezin (27) noted that exploratory psychotherapy is used infrequently with older patients. In the same issue, Savitsky and Goldstein (28) commented that "recent gerontological literature offers a growing body of theory and clinical material supporting the value of systematic psychotherapy" (p. 40). It might be noted that the concept of adult development is beginning to be seen in articles with other focuses as well; for example, a 1986 article in this journal (29) on the clinical researcher in psychiatry included a discussion of major adult developmental tasks facing clinical researchers and presented a developmental perspective on the transition to research.

THE DIAGNOSTIC PROCESS

According to King (23), older patients seek therapy for the following, phase-specific reasons: 1) fear of diminution or loss of sexual potency, 2) fear of loss of effectiveness in the work situation, 3) concerns about retirement, 4) anxieties about marital relationships that surface after the children leave home, 5) awareness of aging, illness, and the resulting dependency on others, and 6) a growing awareness of the inevitability of one's own death.

When a patient in this age group arrives in our office, we find it useful to explore these issues through a developmental history of the life cycle. Detailed developmental histories are routine in the evaluation of children but not of adults. This may be due to the notion that developmental processes play a minor role in the adult and, until recently, the absence of conceptual tools needed to organize the information. Now, however, by using the concepts of adult developmental

stages, tasks, and lines to frame his or her questions and understand responses, the therapist may trace the patient's experience from the time of conception to the present. These data are then integrated with the information obtained from the history of the present illness, family history, psychological or neurological testing, etc., to provide insight into the symptomatology and to plan the most effective therapeutic intervention.

Because of the increased prevalence in older patients of physical problems related to aging and disease, particular attention should be paid to the influence of organic factors on normal and pathological emotional development. This focus can be continued into the psychotherapeutic situation. In many instances the psychotherapy may focus on the patient's denial of organic problems or avoidance of getting proper care or of carrying out physicians' directions. Then the psychiatrist/physician may be the ideal person to promote and facilitate optimum psychophysiological functioning.

In a 1986 panel on the psychoanalysis of older patients (30), investigators stressed that chronological age alone is not a meaningful measure for determining suitability for dynamic treatment. Each person may be evaluated on the basis of personality structure, assets, and motivation. Simburg suggested several distinctive characteristics that can serve as positive prognostic indicators: the person's sense of reconciliation to his or her achievement level, wisdom born of experience in living, a relatively low level of defensiveness, and a perspective indicating some degree of clarity in individual values.

We suggest that the adult developmental history be organized in two ways: first, chronologically in terms of adult developmental stages and tasks, providing continuity with the childhood developmental history; second, in terms of adult developmental lines, by singling out major themes for more comprehensive examination. The diagnostician may conceptualize the material in both ways, integrating data as the evaluation proceeds.

Adult Developmental Stages

Following Erikson (5), we divide adulthood into four broad stages: early (ages 20–40), middle (ages 40–60), late (ages 60–80), and late-late (80 and beyond). However, because of the limited knowledge of adult developmental processes (particularly in regard to late-late adulthood), the absence of biological demarcators to designate the beginning and end of phases, and the tendency of major tasks to overlap stages (for example, becoming a parent at age 18, 45, or 60), we find the stage framework less useful in understanding adulthood than childhood. So does Calvin Settlage, who recently proposed the concept of adult developmental process to supplement the stage model (unpublished paper, 1985). According to this hypothesis, disruption of a previously satisfactory self-regulatory and adaptive system is the stimulus for

development, presenting the individual with a challenge that leads first to developmental tension and then to developmental conflict. Resolution proceeds hand-in-hand with the acquisition, mastery, and structural integration of the new function and leads to a change in self-image, marking the accomplishment of a unit of developmental process. In applying these ideas to treatment, Settlage suggested that the therapeutic endeavor can include the developmental process and that adult development is observed clinically in the interplay between the undoing of pathology and the resumption or initiation of developmental process.

Adult Developmental Tasks

The concept of adult developmental tasks—major, universal themes that are engaged in thought and usually in action by every adult—is a flexible, openended way to organize diagnostic thinking. We have divided these tasks into groups corresponding roughly to the four developmental stages. To illustrate, let us consider middle adulthood. In a diagnostic or therapeutic relationship with a patient in middle adulthood (ages 40-60), if the clinician has in the forefront of his or her mind the tasks related to that phase of development, the chances of understanding the patient are increased. This is so because the patient—and likely the therapist as well—is undoubtedly trying to engage and master (or avoid) one or more of the following issues: the aging process in the body; increased awareness of time limitation and his or her own death; illnesses or deaths of parents, friends, and relatives; changes in sexual drive and activity; markedly altered relationships with parents, young adult children, and a maturing spouse; the assessment of career accomplishment and the recognition that not all personal goals will be reached; and planning for retirement. Many of the symptoms presented by patients in this age group will either be expressed in terms of these tasks or be partially caused by a failure to have engaged them successfully.

Clinical example. Mr. A, a 55-year-old lawyer, sought help for depression. "I'm depressed. I've never felt this way before. I even thought of ending it all. I take home \$150,000 a year and I'm in debt. I haven't had a vacation in five years. It's my wife and those damn kids."

A detailed developmental history revealed childhood problems with separation, probably caused by an overprotective and seductive mother, and significant difficulty with a developmental task of middle adulthood. Mr. A and his wife had eight children, ranging in age from 29 to 17; all eight remained financially and emotionally dependent on him to one degree or another. The oldest son, age 29, had recently quit graduate school; he was living at home, interviewing for jobs. Another son, age 26, was a junior in a European medical school. He was taking a semester off, traveling around the country at his father's expense and being interviewed at U.S. medical schools. A third son, age 24, was in his second year at a private law school. The oldest daughter, age 23, had recently been married; her father was paying for

both her college tuition and the couple's upcoming vacation. Two other daughters, ages 22 and 20, had recently returned home; one had abruptly quit her first job after graduating from college, and the other had not returned to college for her sophomore year. Neither was working. The youngest daughter, age 18, had just started her freshman year at an expensive private college. The youngest son, age 17, an excellent student, was considering Ivy League schools.

The therapist used the concept of adult developmental tasks to understand the symptom, i.e., the patient could not bring himself to separate from his adolescent and young adult children. This was recognized as a significant ongoing developmental conflict, powerful enough to cause depressive symptoms. The evaluation, particularly the developmental history of the life cycle, indicated that Mr. A was an intact, well-functioning individual without evidence of significant past psychopathology. Consequently, a recommendation was made for short-term dynamic psychotherapy tocusing on the phase-specific task of separating from adult children. This was accomplished by exploring his unrealistic support of the children, the failure to reemphasize the marital relationship apart from the children, and the need to take better care of himself physically and emotionally, gratifying his own needs in the process. The symptoms disappeared within weeks.

Adult Developmental Lines

In 1965 Anna Freud (31) introduced developmental lines for childhood, the detailed longitudinal elaboration of specific aspects of ego development across developmental phases: for example, from the freedom to wet and soil to the achievement of bowel and bladder control. Because development is lifelong, similar lines may be delineated for adulthood. We have outlined ten: 1) intimacy, love, and sex, 2) the body, 3) time and death, 4) relationship to children, 5) relationship to parents, 6) mentor relationship, 7) relationship to society, 8) work, 9) play, and 10) finances.

As an example, the developmental line of intimacy, love, and sex may be summarized as follows. In the late teens and 20s, building on the base of acolescent sexual experimentation, in thought and, under normal circumstances, in action each individual finds heterosexual partners, learns to use the body comfo tably as a sexual instrument, and develops the capacity for intimacy—the ability to care for the partner at least as much as for the self. Then in the 20s and 30s, the urge to invest exclusively in one partner and begin a family is engaged. Midlife brings the challenge of accepting the diminution of sexual drive in the partner and the self and a redefinition of relationships with spouse and children. In later years many individuals face the loss of the spouse, the unavailability of sexual partners, and the need to forge sustaining ties with friends, children, and grandchildren. The use of this developmental line allows the clinician to trace the patient's experience in these areas across the adult years, relating current and past experience and anticipating future progression or fixation. In child developmen, chronological and phase markers are more clearly defined than in adulthood, which spans many more years and

contains a much wider variety of experience. Consequently, significant normal variation will be noted along each adult developmental line. Nevertheless, a certain orderliness and predictability is evident, determined by the processes of biological aging that underlie adult development.

CLINICAL ISSUES AND STRATEGIES

In 1985 Liptzin (32) stated, "There is a growing body of empirical work on normal adult development which has not been directly applied to clinical practice" (pp. 183-184). In fact, his paper "Psychotherapy With the Elderly: An Eriksonian Perspective" and "Group Psychotherapy With Patients Over Fifty: An Adult Developmental Approach" by Baker (33) stand alone as attempts to relate adult developmental concepts to treatment. Liptzin focused on the Eriksonian concepts of integrity versus despair and basic trust versus mistrust with a 59-year-old patient, while Baker found that "each group member had uncompleted developmental tasks and was not able to make the transition into later adulthood. . . . An understanding of the concepts of adult development theory [was] helpful in providing an expanded conceptual context to comprehend the concerns and conflicts of these patients. By helping these patients to identify specific areas as normal developmental concerns, their ego strengths can be reinforced and the exploration of alternative, adaptive functioning can be encouraged" (p. 106).

Adult Developmental Understanding of Transference

Our current clinical work in dynamic psychotherapy and psychoanalysis with middle-aged and elderly patients has suggested new understandings of transference. We believe that transference phenomena in adulthood come from three sources: new editions or elaborations of infantile experience, experiences from all developmental stages beyond early childhood, and current midlife or late adulthood developmental conflicts. In such a framework the adult past, as well as the childhood past, is seen as an important source of transference. The idea that all behavior may be explained by an understanding of the first 3 to 6 years of an individual's life is ingrained in Western scientific and cultural thought. For example, at a recent conference on adolescence, speaker after speaker explained the patient's symptoms and behavior almost exclusively in preoedipal and oedipal terms, paradoxically ignoring the latency and adolescent years. Similarly, at an interdisciplinary seminar at the University of California at San Diego, historians, anthropologists, and psychoanalysts debated whether an oedipal or preoedipal conceptualization of Homer was more useful, as though the epic should be explained fully by one or the other. We suggest a theoretical base in which every phase of development throughout the life cycle is

recognized as potentially important; each, because of its position in the life course and its relationship to preceding and subsequent stages, contributes uniquely to the evolution of the mind and to the nature of psychopathology.

Developmental Assessment of a Neurosis

The following outline, reconstructed by patient and analyst during a 5-year analysis, illustrates our technique of taking a comprehensive life-cycle history (childhood and adulthood years) and the manner in which symptoms are formed out of phase-specific events.

Mr. B, a 38-year-old man, sought treatment when his cardiac neurosis and fear of going to work were nearly incapacitating.

Preoedipal years. His mother was lovingly involved in Mr. B's care on a full-time basis. Toilet training was early and severe. The patient got off to a fairly solid start in life.

Oedipal phase. Mr. B preferred his mother, who was seductive. Often nude, she frequently invited him into her bed. His father was emotionally distant. A pronounced infantile neurosis was present, particularly evidenced by severe nightmares. A tonsillectomy was performed when Mr. B was 5 years old. When he was 6, his sister developed diabetes and began to take daily insulin injections. There was clear evidence of an unresolved Oedipus complex and infantile neurosis. This is the first stage of development in which the mind is sophisticated enough to form neurotic structures in response to oedipal drives and conflict.

in response to oedipal drives and conflict.

Latency. At age 8 Mr. B developed phobias (of robbers, monsters) and obsessions (addition and subtraction rituals). At age 10 he underwent sudden major surgery. A few months later his father suffered a heart attack and began to take medication. When Mr. B was 11, his father died of a second infarct. During this phase of development, classical neurotic symptoms occurred for the first time, in response to unresolved oedipal conflict; major traumas occurred that influenced future symptom formation and the adolescent and young adult developmental tasks of choosing a career.

Adolescence. At age 14 Mr. B became fearful that he and his mother would die (as a defense against the upsurge of adolescent sexual feelings toward her and as a reaction to his oedipal "victory" over his dead father). Between ages 15 and 17 new symptoms appeared: a sleep disturbance and depression, leading him on his own to begin using sleeping pills (an identification with his father and sister). Other aspects of adolescent development were less problematic—fine academic performance, numerous friends, and some dating. During adolescence the neurosis was elaborated with the onset of a sleep disturbance and the beginning of a pattern of drug dependence, symptoms related to a latency event (the death of his father) and adolescent sexual maturation.

Young adulthood. Mr. B decided to become a physician. During the time he was in medical school he had intercourse for the first time. He continued to self-medicate, using tranquilizers and sleeping pills. At age 25 he married. Life revolved increasingly around his symptoms. Age 35 saw the onset of a cardiac neurosis (identification with, and punishment for, his father's death); this was followed at age 37 by a work phobia. A year later he entered analysis because he was unable to work and fearful that he would die in his 40s,

as his father had. Phase-specific tasks were both skewed by the neurosis and determined by its elaboration. The choice of career had been strongly influenced by the death of his father and his own surgery during latency. He could trust no one but himself for his own care. The onset of the cardiac neurosis was related to the growing, phase-specific midlife preoccupation with time limitation and personal death.

Technically, it was not enough to help the patient understand the relationship between the infantile and adult neurosis, that is, the oedipal and preoedipal determinants. Therapist and patient also had to detail the elaboration of the neurosis through all subsequent developmental phases to the present. Then, as has been described by Shane (34), the patient was helped to consider the effects of the insights and freedom gained in the analysis on his present and future development. Although working through is an integral part of this process, it is more in the sense that new phase-specific adult developmental tasks and conflicts which were not encountered earlier in life are examined both from the standpoint of the effect of earlier experience on normal adult developmental processes and, conversely, to determine the contribution of adult developmental conflict to the symptom picture. Adult developmental theory provides a new framework within which to understand the effect of infantile experience on later life and a new dimension to the concept of working

With the life-cycle perspective in mind, let us return to a more specific consideration of transference. Developmental views of transference have been expressed by Cohler and Coltrera. Cohler (35) wrote of development and remembering:

Consideration of the impact of psychological development across the life cycle on the experience of remembering the past shows that it is impossible to consider an objective past apart from developmentally determined views of this past which emerges successively during childhood, adolescence, young adulthood, and middle and old age. The fantasies which emerge during the oedipal phase are but prototypes of such developmentally determined fantasies which are associated with each of the phases of development across the life cycle. (pp. 174–175)

Coltrera (36) spoke directly about transference: "The transference neurosis is very much developmentally determined, its character and focus changing throughout the life cycle according to phase-specific developmental and conflict resolutions and their subsequent internalizations" (pp. 304–305).

Forms of Transference

Clinical understanding may also be enhanced by the recognition that transference phenomena take several forms in older patients, depending on whether child or adult experience is the source. Parental transference is the most common and best understood. On the basis of past experience, patients of any age react to the therapist as if he or she were a parent. In traditional

terms the reference to the past is to the infantile past, the oedipal and preoedipal years, but in our conceptualization, experience with parents in the patient's adolescence and adulthood may also be represented in the parental transference. These multigenerational transferences encompass the complexity of transference phenomena. Patients not only relive preoedipal and oedipal events with their therapists as parental figures; they also reenact peer and sibling experiences and manifest "reverse" transferences in which the therapist is seen as the patient's son or daughter.

In peer or sibling transference the patient reacts to the therapist as if he or she were a spouse, friend, or sibling. The idea that persons other than the parents play very important roles in every individual's development is obvious enough, but there is little recognition of their significance in the existing theory of transference, as evidenced by the paucity of reports in the literature or scientific presentations about transference objects other than the parents of early childhood. The following comment by Hiatt (37) is an exception.

A spouse may occupy a greater span of years than a parental figure, and children, who may be all that remain of the patient's family constellation, tend to alter the transference seen in psychotherapy. In the "replaying of the chorus" of those growing old, the therapist should try to uncover the "infantile neurosis"; however, other significant figures than the patient's parents may have an impact on the transference which the patient reflects with his physician. (p. 594)

We see the lack of references to spouses and children in the transference literature as another example of how the exclusive emphasis on early childhood has inhibited theoretical understanding of the importance of adult experience.

The third form of multigenerational transference is called son or daughter transference. Here, the usual transference paradigm is reversed, and the patient reacts to the therapist as if he or she were the patient's child. This form of transference has infantile components, since children play at being parents and are deeply engrossed with their own progenitors, but it grows primarily out of the actual adult experience of parenthood. Parent-patients transfer their unresolved expectations and disappointments and their hostile and loving impulses about their children—real or imagined, from multiple phases of development—onto the therapist. For example, one 70-year-old woman, who had been unnecessarily sterilized at age 21 and had had a lifetime of difficulty with her adopted children, developed an intense, idealized son transference toward her 35-year-old male therapist. He was the accomplished, attentive, loving son that she had always wanted. As this aspect of the transference emerged, the patient became punishing and critical. Gradually, her profound anger and disappointment in her adopted children and her wish for a perfect child of her own came to the fore. As these feelings emerged they were interpreted like any other transference. It was understood by the therapist to be a central component of this woman's character, symptoms, and life experience. By no means was the transference limited to this form; the patient also developed strong paternal and sibling feelings as well. In all three forms of transference, the therapist was the recipient of powerful libidinal and aggressive feelings. Other aspects of her analysis, begun at age 68, will be described later.

Although these three forms of transference are presented separately for the sake of clarity, we do not mean to imply that they occur in isolation. There is no simple trichotomy. All transference material has multiple meanings, determinants, and developmental sources. The therapeutic task remains the same, if more complicated: to understand the meanings of the transference phenomena and eventually to convey these insights to the patient.

Countertransference Patterns in the Treatment of Older Patients

Therapists' countertransference responses to older patients run the gamut, just as they do with younger adults and children, but in addition there are countertransference reactions that are specifically related to adult development. To illustrate, let us briefly consider three. The first of these has to do with the therapist's reaction to aging, an issue addressed by Hassler (38). "For both the middle-aged (or older) analyst and his or her patient, thoughts and feelings about the finiteness of time and personal death, although disguised, are rarely absent. Both partners in the analytic process deny on various levels the clinical and developmental significance of this objective time frame" (p. 115).

Second, therapists tend to react to the sexuality of older patients with surprise, dismay, guilt, and anxiety, particularly when it is directed toward them in the transference, as illustrated by the following response of a female therapist in her 30s to a male patient in his 60s (39). "Early in the treatment process, Mr. D's sexual feelings emerged. His well-groomed appearance and adolescent-like nervousness in the first half of the sessions prompted a little discomfort on my part. My concern was how to engender respect and develop a therapeutic alliance with a patient who was old enough to be my grandfather" (pp. 164-165). The determinants of this attitude are likely from both infantile and adult sources. Unconscious factors may be related to the therapist's unresolved oedipal feelings about parental sexuality and adult oedipal feelings of triumph over aging or dead parents.

Last, the dependency needs of older patients, particularly those expressed by individuals who are alone and/or ill, take on a special prominence in treatment. The exaggerated dependency needs of the patient may stimulate the therapist's infantile wishes to dominate and control the parent-patient and may become intertwined with actual ongoing conflicts with aging parents in the present. In either event, the therapist is consciously and unconsciously forced to confront a

powerful confluence of feelings from the past and present about his or her parents that affect the treatment process and may be expressed in countertransference reactions.

Analysis of a 70-Year-Old Woman

Many of the ideas presented in this paper are illustrated in the recently concluded psychoanalysis of a 70-year-old woman conducted by Dr. Eli Miller and extensively studied in collaboration with us. Other aspects of this case appear in an article by Dr. Miller in the *Journal of Geriatric Psychiatry* (40).

Ms. C, a 68-year-old married woman with grown adopted children, sought treatment for anxiety, depression, and a general sense of disorganization in her life, especially related to trauma associated with her children. Her husband was a very supportive, cheerful, successful retired businessman. They were soon to celebrate their 40th wedding anniversary. Her relationship with him was warm, positive, and nonconflictual, although Ms. C desired sex more often than he.

The report of her psychological testing included these statements: "Her memory is sharp and clear, her grasp of information intact. Judgment is unimpaired, and in general, she presents a picture of a high level of ego integrity. There is no evidence of deterioration or sclerotic implications. . . . These findings place her in good stead for any kind of dynamically oriented therapy . . . while one does not often think of psychoanalysis for a person of her age."

Response to recommendation for analysis. When the therapist discussed the possibility of analysis with Ms. C, he pointed out to her that in the past, one of the contraindications for analysis in her age group was the potential for depression when patients found out all that they might have missed in the course of life. She responded with a chuckle, saying that you did not have to be in analysis for that to happen; someone her age often did that without any other prodding.

Ability to analyze transference and infantile oedipal material. As year 2 progressed, Ms. C began to ask numerous questions and express frustration when they were not answered. The therapist asked if this repeated an interaction with her father. "Yes, my father was taciturn, but you are still stingy with words." The analyst mentioned that his words might be seen as gifts of love to her. She responded by agreeing and crying. She thought of someone in her childhood who had given her a lollipop and then recalled being depressed at age 6 while sitting in a small rocking chair. She associated these thoughts to the sadness she had experienced when her father was away. The therapist proposed a link between the childhood depression and her relationship with her father. She said that the sadness originated around age 3 and wondered why it was still lingering.

Relationship between late adolescent and oedipal themes. Ms. C associated to a dream with incestuous themes. Incest was supposedly horrible. This caused her to recall an incident at age 20 when she had had a surprisingly strong burst of intimate feelings for her father. "I had had sex very recently before the episode with a very charming young man. I was fearing I'd be pregnant, and that emotion hit me as I hugged my father. He was shaving, and I must have scared him"

Multigenerational transferences—oedipal father, son,

young lover. Early in the third year of her analysis, Ms. C brought her pregnant poodle to a session. She wanted to give the analyst one of the puppies. He asked her what she thought the meaning of that wish was. "The wish to give a baby to you would be the likely meaning [laughing]. And then it could mean that I want to have sex with you. I want to give you all sorts of gifts. I want to know what kind of house you live in and what sort of possessions you have. It's like with my children; I want them to have what they want and need." He stated, "You're feeling toward me as if I were a son." "Yes, mentally, materially, emotionally. It's through children that one carries on. They are your immortality. Ms. C continued to focus on the puppies and recalled that before marriage she had wanted six children. This connected with the six puppies in the litter. In a teasing manner she promised to bring the therapist a puppy soon. "I haven't asked you yet whether you want a boy or a girl. Shouldn't we discuss the sex of the baby?" He responded, "Our baby?" She replied, "Of course; you said so [laughing]. Now you're going to disclaim fathership? I'll go and have a baby anyhow ... six of them. Having a baby is a collaboration between two people." To her surprise Ms. C associated to the 15-year-old daughter of one of her friends who had committed suicide with her father's gun. Ms. C was deeply distressed and wondered why the girl chose her father's gun. "Maybe he was too close to the girl, both physically and emotionally. Like I wanted my father and you to be," she added.

This analysis, conducted without deviation from classical technique, produced considerable symptom relief, a more coherent sense of self, resolution of longstanding sexual conflict, and an optimistic outlook toward the future.

CONCLUSIONS

Some of the major clinical implications of adult developmental theory may be summarized as follows.

- 1. Older patients need not be treated superficially. Selected individuals are suitable for dynamic psychotherapy and psychoanalysis, regardless of chronological age.
- 2. An adult developmental orientation, as expressed through adult developmental lines and tasks, and a developmental history of the life cycle add new dimensions to the diagnostic process and therapeutic effort.

3. Symptoms are a condensation of experience from all phases of development, not a simple expression of

infantile conflict in the adult present.

- 4. Thoughts about the aging body, time limitation, and one's own death—central issues in the psychic life of every adult patient—are often avoided by patient and therapist alike.
- 5. Sexual thoughts, feelings, and activity remain as powerful, dynamic issues until death.
- 6. In the second half of life, transference is a more complex phenomenon, taking a variety of forms. Special attention should be paid to the adult past as a source of transference.
- 7. Similarly, countertransference responses to the older patient are complicated, since they are reflections

of the therapist's infantile and adult experience with his or her parents and other significant figures.

The study of adult development is a psychiatric frontier; the application of adult developmental theory, an outpost on that frontier. As our knowledge of developmental processes in the second half of life increases, we should see continuous enhancement in psychotherapeutic technique and the need to continually revise existing theories of normal development and pathology. Perhaps we have reached the point where a detailed understanding of the second half of life may put the first half of life into perspective, instead of always the other way around.

REFERENCES

- 1. Freud S: Three essays on the theory of sexuality (1905), in Complete Psychological Works, standard ed, vol 7. London, Hogarth Press, 1953
- 2. Freud S: Analysis, terminable and interminable (1937). Ibid, vol 23, 1964
- Van Gennep A: The Rites of Passage. Translated by Vizedom MB, Caffee CL. Chicago, University of Chicago Press, 1960
- Jung CG: Modern Man in Search of a Soul. New York, Harcourt, Brace, 1933
- 5. Erikson EH: Childhood and Society, 2nd ed. New York, WW Norton, 1963
- Gould RL: Transformations: Growth and Change in Adult Life. New York, Simon & Schuster, 1978
- 7. Guttman DL: The cross-cultural perspective: notes toward a comparative psychology of aging, in Handbook of the Psychology of Aging. Edited by Birren JE, Schare KW. New York, Van Nostrand Reinhold, 1977
- Levinson DJ, Darrow CN, Klein EB, et al: The Scasons of a Man's Life. New York, Alfred A Knopf, 1978
- Neugarten BL: Time, age, and the life cycle. Am J Psychiatry 1979; 136:887–894
- 10. Pollock GH: Mourning and adaptation. Int J Psychoanal 1961; 42:341-348
- 11. Vaillant GE: Adaptation to Life. Boston, Little, Brown, 1977
- 12. Colarusso CA, Nemiroff RA: Adult Development: A New Dimension in Psychodynamic Theory and Practice. New York, Plenum, 1981
- 13. Nemiroff RA, Colarusso CA: The Race Against Time: Psychotherapy and Psychoanalysis in the Second Half of Life. New York, Plenum, 1985
- 14. Freud S: On psychotherapy (1906), in Collected Papers, vol I. Edited by Jones E; translated by Riviere J. London, Hogarth Press, 194.
- 15. Abraham K: The applicability of psycho-analytic t:eatment to patients at an advanced age (1919), in Selected Papers on Psychoanalysis. London, Hogarth Press, 1949
- Jelliffe SE: The old age factor in psychoanalytic therapy. Med J Records 1925; 121:7–12
- Fenichel O: The Psychoanalytic Theory of Neurosis. New York, WW Norton, 1945
- 18. Hollender MH: Individualizing the aged. Social Casework 1952; 33:337-342
- 19. Wayne GJ: Modified psychoanalytic therapy in senescence. Psychoanal Rev 1953; 40:90-116
- 20. Kaufman MR: Psychoanalysis in late-life depressions. Psychoanal Q 1937; 6:308-335
- Segal H: Fear of death: notes on the analysis of an old man. Int J Psychoanal 1958; 34:178–181
- 22. Jacques E: Death and the midlife crisis. Int J Psychoanal 1965; 46:502–514
- 23. King PH: The life cycle as indicated by the transference in the psychoanalysis of the middle-aged and elderly. Int J Psychoanal 1980; 61:153-160

ADULT DEVELOPMENTAL THEORY

- 24. Pollock GH: Aging or aged: development or pathology, in The Course of Life: Psychoanalytic Contributions Toward Understanding Personality Development, vol III. Edited by Greenspan SI, Pollock GH. Adelphi, Md, National Institute of Mental Health, 1980
- 25. Butler RN, Lewis MI: Aging and Mental Health: Positive Psychosocial Approaches. St Louis, CV Mosby, 1977
- Rechtschaffen A: Psychotherapy with geriatric patients: a review of the literature. J Gerontol 1959; 14:73–84
- Berezin MA: Introduction to psychotherapy of the elderly. J Geriatr Psychiatry 1983; 16:3–6
- Savitsky E, Goldstein R: Psychotherapy of the elderly: case reports. J Geriatr Psychiatry 1983; 16:39–41
- 29. Burke JD Jr, Pincus HA, Pardes H: The clinician-researcher in psychiatry. Am J Psychiatry 1986; 143:968-975
- 30. Miller NE: The psychoanalysis of the older patient: panel report. J Am Psychoanal Assoc 1986; 34:163-178
- 31. Freud A: Normality and Pathology in Childhood: Assessments of Development. New York, International Universities Press, 1965
- 32. Liptzin B: Psychotherapy with the elderly: an Eriksonian perspective. J Geriatr Psychiatry 1985; 18:183-202
- 33. Baker FM: Group psychotherapy with patients over fifty: an

- adult developmental approach. J Geriatr Psychiatry 1984; 17: 79-108
- 34. Shane M: The developmental approach to "working through" in the analytic process. Int J Psychoanal 1979; 60:375–382
- 35. Cohler BJ: Adult developmental psychology and reconstruction in psychoanalysis, in The Course of Life: Psychoanalytic Contributions Toward Understanding Personality Development, vol III. Edited by Greenspan SI, Pollock GH. Adelphi, Md, National Institute of Mental Health, 1980
- Coltrera J: Truth from genetic illusion: the transference and the fate of the infantile neurosis. J Am Psychoanal Assoc (Suppl) 1979: 27:289–313
- 37. Hiatt H: Dynamic psychotherapy with the aging patient. Am J Psychother 1971; 25:591-600
- 38. Hassler JM: Turning forty in analysis, in The Race Against Time: Psychotherapy and Psychoanalysis in the Second Half of Life. Edited by Nemiroff RA, Colarusso CA. New York, Plenum, 1985
- 39. Crusey JE: Short-term psychodynamic psychotherapy with a sixty-two-year-old man. Ibid
- 40. Miller E: The oedipal complex and rejuvenation fantasies in the analysis of a seventy-year-old woman. J Geriatr Psychiatry (in press)

Familial Schizophrenia and Treatment Response

Jeremy M. Silverman, Ph.D., Richard C. Mohs, Ph.D., Michael Davidson, M.D., Miklos F. Losonczy, M.D., Ph.D., Richard S.E. Keefe, B.A., John C.S. Breitner, M.D., M.P.H., Judith E. Sorokin, B.A., and Kenneth L. Davis, M.D.

Thirty-nine patients with chronic schizophrenia for whom hospitalization was clinically indicated received haloperidol for 4 to 6 weeks in a standardized dose schedule. Responders were compared with nonresponders for family history, baseline symptom factors, and ventricle-brain ratio (VBR). The lifetime risk for schizophrenia spectrum disorders was higher among first-degree relatives of nonresponders than among first-degree relatives of responders. Treatment responders had higher baseline scores on the factors of activation and hostile-suspiciousness, but the groups did not differ in any other baseline symptom factor or in VBR. The authors suggest that there is an association between failure to respond to drugs and genetic loading for schizophrenia spectrum disorders. (Am J Psychiatry 1987; 144:1271-1276)

Neuroleptics are not equally beneficial to all schizophrenic patients, and some patients appear to show no recognizable improvement in response to neuroleptic administration. The identification of factors associated with treatment response would have obvious clinical utility and might also contribute to a reformulation of current concepts of schizophrenia by suggesting subtypes with differing treatment responsivity.

Although a genetic predisposition remains the only accepted risk factor for schizophrenia, the relationship

Received Jan. 31, 1986; revised Sept. 12, 1986, and March 2, 1987; accepted April 3, 1987. From the Psychiatry Service, Bronx VA Medical Center; and the Department of Psychiatry, Mount Sinai School of Medicine, New York. Address reprint requests to Dr. Mohs, Psychiatry Service (116A), Bronx VA Medical Center, 130 West Kingsbridge Rd., Bronx, NY 10468.

Supported by a Schizophrenia Biological Research Center grant from the Veterans Administration to the Bronx VA Medical Center. between treatment response and genetic loading remains a little-investigated subject (1). Family studies (2), family history studies (3), and adoption studies (4, 5) have suggested genetic transmission not only for schizophrenia but also for the broader category of "schizophrenia spectrum disorders" (4), which includes schizophrenia, chronic schizoaffective disorder, and schizophrenia-related personality disorder.

Genetic loading for schizophrenia spectrum disorders cannot be studied directly. Without a biological marker, the identification of affected family members is the only method for implicating a genetic pasis for the disorder in a patient. Although many of the difficulties associated with the evaluation and assessment of a subject's relatives through knowledgeable informants are largely surmountable (3, 6, 7), family history is still only a crude indicator for the presence of a genetic disorder. Because of differences in family size, age of relatives, and incomplete penetrance, it is quite likely that some patients lacking a positive family history could have a genetic loading for schizophrenia. In addition, patients may have a relative with a schizophrenia spectrum disorder for reasons not resulting from genetic similarity, such as common environmental stress or chance assortment of nonshared genes. One way to deal with these problems is to treat family history as a dependent variable or an outcome measure. This is methodologically useful, even though a genetic predisposition certainly precedes and does not result from most other factors associated with schizophrenia. By permitting the use of analytical techniques that control for family size and the number of relatives at risk, such a design allows assessment of genetic loading associated with variables that can be more usefully dichotomized, such as treatment response.

Other factors previously investigated as possible correlates of drug response are symptom types (8, 9) and brain structure pathology (10–12). Neuroleptic drugs have frequently been found to relieve "positive"

symptoms (e.g., hallucinations, delusions, florid thought disorder) better than "negative" ones (e.g., withdrawal, affective blunting, anhedonia) (8), and some authors have argued that the presence of positive symptoms suggests a clinical response to treatment (13). The absence of evidence of structural brain pathology or atrophy that is sometimes found in schizophrenia on CAT scan (14, 15) may predict, according to some investigators, a favorable response to neuroleptic treatment (10–12), but exceptions to this observation have also been seen (16; unpublished 1982 paper by D.R. Weinberger et al.).

METHOD

Thirty-nine men with chronic schizophrenia, 23 to 61 years old, were recruited from either the emergency rooms (N=27) or inpatient units (N=12) of the Montrose, Lyons, or Bronx Veterans Administration (VA) hospitals and admitted to the inpatient research services. In every case, psychiatric hospitalization was clinically required. However, subjects were able to remain drug free for at least 2 weeks while they underwent diagnostic and biological evaluation. The subjects met Research Diagnostic Criteria (RDC) (17) for definite schizophrenia or schizoaffective disorder, mainly schizophrenia (N=37), and/or Feighner criteria (18) for definite schizophrenia (N=27). All patients were in an active phase of their illness. Diagnoses were assigned on the basis of the Schedule for Affective Disorders and Schizophrenia (19), administered to each subject to ascertain RDC diagnosis. All subjects provided informed consent.

After a minimum 2-week drug-free period (mean± SD drug-free days in the hospital=29.1±17.7, range= 14-87), subjects received treatment with haloperidol; 10 mg of haloperidol was administered twice daily for the first 28 days. In the absence of a response and when side effects or other clinical considerations did not contraindicate, the dose of haloperidol was increased to 15 mg twice daily on days 29-35 and again to 20 mg twice daily on days 36-42. Subjects also received 2 mg of benzotropine mesylate twice daily throughout the study. Weekly ratings of symptom severity, including a baseline assessment on the day before treatment, were conducted by two independent raters using the Brief Psychiatric Rating Scale (BPRS) and the Clinical Global Impression (CGI), a 7-point scale measuring global clinical severity of symptoms. Interrater reliability was good: the intraclass coefficient (ICC) for the BPRS was .95; for the CGI it was

The minimum recognizable response to treatment was defined on clinical grounds as a 20% decrease in BPRS score from baseline or a 2-point decrease in CGI score. Patients whose scores fell below both of these levels by the last day of the study were considered nonresponders.

Diagnostic family histories were gathered from fam-

ily members or persons close to the family by an investigator blind to the patients' treatment response. Probands were considered family history positive for schizophrenia or a schizophrenia spectrum disorder if one or more first- or second-degree relatives met criteria for schizophrenia-related personality (3) or met Family History Research Diagnostic Criteria (FH-RDC) (6) for the probable diagnosis of chronic schizophrenia; schizoaffective disorder, chronic; or unspecified functional psychosis, chronic type. Lifetime risk for schizophrenia spectrum disorders, i.e., the ratio of number of relatives with schizophrenia spectrum disorders to number of relatives at risk, was calculated for first-degree relatives of responders and nonresponders separately (20). This procedure takes into account the decreasing number of relatives at risk, at a given age, due to death, loss to follow-up, or youth. The Lee-Desu D statistic (21) was used to test the null hypothesis that the two groups of relatives were samples with the same lifetime risk. Proband chronicity (defined here in two ways—the log-transformed number of months of hospitalization and the log-transformed number of hospitalizations) is potentially related to both treatment response status and lifetime risk for schizophrenia spectrum disorders in relatives and is therefore a possible confounding factor in an apparent relationship between these two variables. For this reason, a stepwise proportional-hazards model (22) was used to determine if drug response status was predictive of lifetime risk after chronicity variables had been partialed out.

The severity of positive symptoms was measured by averaging drug-free baseline BPRS scores for hallucinatory behavior, unusual thought content, grandiosity, suspiciousness, and conceptual disorganization. Negative symptoms were assessed by the mean of baseline BPRS scores for blunted affect, motor retardation, and emotional withdrawal. Five other BPRS symptom clusters (anxious-depression, anergia, thought disturbance, activation, and hostile-suspiciousness) described by Overall and Klett (23) were also considered.

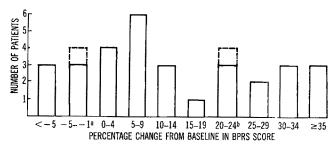
The ventricle-brain ratios (VBRs) of 27 subjects who had CAT scans of the head without contrast on a Technicon 2020 scanner were measured. Slices were taken 1 cm apart, parallel to the orbitomeatal line. The cut that displayed the lateral ventricles most prominently was used to determine the VBR. After standardization, the ventricular margins were outlined by using an operator-controlled joystick; the enclosed area was automatically displayed for both the right and left lateral ventricles. Similarly, the area of the brain on that slice was also determined. The averages of the left and right lateral ventricular areas were summed and divided by the brain areas, and the result was multiplied by 100. Each VBR was determined by two separate raters, blind to the age and diagnosis of the subject. Final VBRs used in subsequent analyses were the numerical averages of these two raters' measurements (intrarater reliability ICC=.99; interrater reliability ICC=.96).

RESULTS

Figure 1 shows the distribution of percentage change in BPRS scores from baseline in the 33 subjects with calculable BPRS ratings. Only one nonresponder showed a total symptom decrease (14.8%) within 6% of our 20% cutoff for response, leaving a 5-point separation between responders and nonresponders. Despite the appearance of the data, a bimodal distribution was not established statistically (Kolmogorov-Smirnov statistic=.607, n.s.). Since tests of bimodality have low statistical power (24), however, this statistic cannot be regarded as definitive, and the appearance of the data certainly suggests bimodality. Using the 20% criterion, we determined that 16 of the 39 subjects responded to neuroleptics and that 23 subjects were nonresponders. For the six subjects with symptoms preventing our obtaining BPRS ratings (e.g., catatonic stupor), treatment response evaluation was based solely on the CGI score. Table 1 provides the demographic characteristics of the total sample and of responders and nonresponders separately.

Family histories were obtained for 36 subjects. Two or more family members or persons close to the family were interviewed to obtain six (43%) of the 14 responder family histories and 11 (50%) of the 22 nonresponder family histories. Nineteen other family histories were obtained from one informant. No knowledgeable informant was found for the three remaining subjects. In families of nonresponder probands, 14 of 108 first-degree relatives 15 years old or older were given a diagnosis of schizophrenia (N=3), schizoaffective disorder (N=2), or schizophreniarelated personality (N=9). In contrast, among firstdegree relatives of responder probands, two of 71 who were 15 years old or older were given a schizophrenia spectrum disorder diagnosis; both had schizophreniarelated personalities. Twelve of 22 nonresponder probands were family history positive for schizophrenia or a schizophrenia spectrum disorder (i.e., at least one first- or second-degree relative was so diagnosed), and two of 14 responder probands were family history positive (p<.01, Fisher's exact test). Separate lifetime risks for schizophrenia spectrum disorders were calculated for the first-degree relatives of responders and nonresponders. Table 2 shows the life tables for schizophrenia spectrum disorders in treatment responders and nonresponders. The lifetime risk for a schizophrenia spectrum disorder was significantly greater for the relatives of nonresponders than for the relatives of responders (Lee-Desu D=4.47, df=1, p<.05). Using a stepwise proportional-hazards model, we entered the log-transformed number of months of hospitalization and the log-transformed number of hospitalizations of probands simultaneously into the survival analysis; there were significant relationships between these two covariates and risk to relatives for schizophrenia spectrum disorders. Greater risk was associated with higher number of months of hospitalization ($\chi^2=6.57$, df=1, p=.01) and lower number of hospitalizations

FIGURE 1. Distribution of Changes in BPRS Scores Among 33 Schizophrenic Patients Given Haloperidol for 4—6 Weeks



^aFor one patient the BPRS score on the last day was not fully determined.

^bFor one patient the baseline BPRS score was not fully determined.

(χ^2 =4.09, df=1, p<.05) for probands. Treatment response status continued to be significantly predictive of lifetime risk for schizophrenia spectrum disorders in relatives after removal of the variance associated with the chronicity variables (delta χ^2 =4.12, df=1. p<.05).

Table 3 shows the BPRS symptom cluster scores of treatment responders and nonresponders. Responders had significantly higher baseline levels of activation and hostile-suspiciousness. By definition, responders showed more change from baseline to day 29 in total BPRS score than nonresponders. Significant differences were found in change scores for positive symptoms, thought disturbance, activation, and hostile-suspiciousness. The difference in thought disturbance, though in the expected direction, was primarily due to an increase of symptoms among nonresponders rather than a decrease in responders. No significant difference was detected in mean VBR between the 11 responders (mean±SD=6.60±2.19) and the 16 nonresponders $(mean \pm SD = 6.21 \pm 4.05)$ for whom these data were available.

DISCUSSION

A positive family history of schizophrenia and related spectrum disorders was more common for patients who did not respond to a standard dose of haloperidol than for patients who did respond. Other factors associated with responsivity proved to be high baseline levels of hostile-suspiciousness and activation as revealed by the BPRS. However, no other BPRS factor, degree of positive or negative symptoms, or VBR was able to discriminate between treatment-responsive and treatment-nonresponsive patients.

In this study, treatment response was dichotomized to investigate possible differences in genetics, symptom type, and neuroanatomy. Although response to neuroleptics is usually seen to be on a continuum, there are patients who show no appreciable benefit from these drugs. The 20% decrease in BPRS scores that was established on clinical grounds as a minimum recognizable therapeutic response is supported further as an

TABLE 1. Demographic Characteristics of 39 Schizophrenic Patients Who Did or Did Not Respond to Haloperidol

	Age at O Age (years) (years					Number of Hospitalizations		Time Spent in Hospitals (months)		
Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Responders (N=16)	44.1	11.1	23.6	3.8	20.5	10.3	8.6	3.5	99.8	121.4
Nonresponders (N=23)	40.8	12.1	26.2	7.1	14.3	9.3	6.2a	2.9	44.5	56.0
Total (N=39)	42.0	11.7	25.2	6.1	16.6	10.0	7.1	3.3	64.6	88.1

^aSignificant difference between responders and nonresponders (t=2.34, df=37, p<.05).

TABLE 2. Lifetime Risk of a Schizophrenia Spectrum Disorder in First-Degree Relatives of Schizophrenic Patients Who Did (N=14) or Did Not (N=22) Respond to Haloperidol

Age at Onset of Schizophrenia Spectrum Disorder	Relatives With Disorder	Relatives at Risk	Cumulative Proportion Without Disorder ^a	Lifetime Risk ^b	
Relatives of responders					
19 years	1	65.5	.9847	.0153	
26 years	1	56.0	.9671	.0329	
Relatives of nonresponders					
18 years	9	100.0	.9100	.0900	
34 years	1	68.0	.8966	.1034	
35 years	1	64.0	.8826	.1174	
45 years	1	47.5	.8640	.1360	
53 years	1	36.0	.8400	.1600	
56 years	1	32.0	.8138	.1862	

^a(Number of relatives without disorder/number of relatives at risk) × (previous cumulative proportion of relatives without disorder). ^b1-(cumulative proportion of relatives without disorder). The lifetime risk for schizophrenia spectrum disorder was significantly greater for relatives of nonresponder probands than for relatives of responder probands (Lee-Desu D=4.47, df=1, p<.05).

TABLE 3. Baseline BPRS Scores and Change After Treatment of Schizophrenic Patients Who Did (N=14) or Did Not (N=22) Respond to Haloperidol

BPRS Item	Baseline				Change After Treatment			
	Responders		Nonresponders		Responders		Nonresponders	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Symptom cluster								
Positive symptoms	3.47	0.78	3.11	0.87	1.01	1.11	-0.20^{a}	0.78
Negative symptoms	2.64	0.77	2.78	1.38	0.56	0.78	0.35	0.63
Anxious-depression	2.63	0.88	2.24	0.85	0.50	0.99	-0.16	0.54
Anergia ¹	2.38	0.63	2,45	1.06	0.50	0.72	0.40	0.66
Thought disturbance	3.42	0.78	3.23	0.98	0.08	1.34	-1.30^{b}	1.14
Activation	2.83	0.76	2.16 ^c	0.67	1.36	0.98	0.23^{d}	0.33
Hostile-suspiciousness	2.75	0.89	2.17 ^e	0.79	1.01	1.24	-0.07^{f}	0.68
Total	50.23	7.48	44.85	9.25				_

^aSignificant difference between groups (t=3.85, df=34, p<.001).

appropriate cutoff by the fact that only one patient was in the 15%-20% range, at the extreme low end of that range, which suggests a clear separation between groups.

Dichotomizing treatment response allowed for the comparison of lifetime risk for schizophrenia spectrum disorders in relatives of responsive and nonresponsive probands. This method is preferable to examining the family history status of probands because it controls for possible differences between proband groups in family size and in age distribution of family members.

Using lifetime risk or survival analysis also allowed us to investigate the predictive value of treatment response status after partialing out chronicity variables; the results from this analysis further supported the suggested relationship of treatment response failure with a greater lifetime risk for schizophrenia spectrum disorders in relatives.

Three factors must be considered in the interpretation of these results. First, haloperidol was not administered under double-blind conditions. Generally, the importance of a placebo condition in studies with

^bSignificant difference between groups (t=3.31, df=34, p<.005).

Significant difference between groups (t=3.03, df=34, p<.01).

dSignificant difference between groups (t=5.01, df=34, p<.001).

Significant difference between groups (t=2.18, df=34, p<.05). Significant difference between groups (t=3.38, df=34, p<.005).

potential antipsychotic agents is to control for false-positive results (i.e., placebo-related improvement). Given the low level of clinical response to haloperidol in this study, it seems unlikely that the number of responders was swollen by false-positives. The usefulness of placebo as a guard against false-negative results (i.e., failing to detect drug effects that nevertheless exist) is of doubtful value. It is unlikely, therefore, that the elimination of any "false" haloperidol responders—placebo responders—would have altered the family history finding.

A second issue for consideration is the possible difference in chronicity between responders and nonresponders. Neuroleptic responders were on average older and had an earlier age at onset, a longer illness duration, and more hospitalizations; they had also spent more time in the hospital than nonresponders. However, only the number of hospitalizations was significantly different between responders and nonresponders. Furthermore, the two groups had virtually the same rate of hospitalization per year of illness: .40 for responders and .43 for nonresponders. Although even this similarity of longitudinal course is surprising, these results have support from long-term follow-up studies, which have not found any obvious indication that neuroleptic treatment affects the overall remission rate among schizophrenic patients other than at first onset. There appears to be little difference between the percentages of today's patients reaching complete remission and of the patients in the preneuroleptic era (25-27).

A third problem concerns the generalizability of this study given the relatively high rate of neuroleptic nonresponders. In fact, the criterion for responsivity to haloperidol was extremely modest, only a 20% change from baseline in BPRS score or a 2-point decrease in CGI score. This standard seems justified clinically as a minimum recognizable response and empirically by the absence of nonresponder patients within 5 percentage points of the cutoff. It remains somewhat surprising that after up to a 6-week trial of haloperidol in doses up to 20 mg twice daily, there were not more responders. It has been pointed out (28, 29) that patients with chronic schizophrenia, who made up the large majority of patients in this study (minimum illness duration was 2 years; only two patients had been ill for less than 5 years), are less likely to be treatment responsive than patients in their first episode of illness. The present results certainly support this claim.

The critical question that must be addressed in interpreting these results is whether the low rate of neuroleptic responsiveness in this population biases the relationship between nonresponse to neuroleptics and family history of schizophrenia or schizophrenia spectrum disorders. Conceivably, with more neuroleptic-responsive patients, a higher incidence of family-history-positive probands among these patients would have been generated, although this remains speculation. However, this possibility can be indirectly assessed by comparing the risk reported in the literature

among first-degree biological relatives of schizophrenic patients for schizophrenia and schizophrenia spectrum disorders with the risk found in this study among relatives of neuroleptic-nonresponsive patients. A comparison with studies methodologically similar (those using the family history method) indicates that the relatives of neuroleptic-nonresponsive patients do have a higher risk for schizophrenia and schizophrenia spectrum disorders than relatives of a mixed group of schizophrenic patients. Kendler et al. (3), using the Weinberg abridged method to assess morbid risk (30), found a 7.6% risk for schizophrenia spectrum disorders among the first-degree relatives of a sample of 55 schizophrenic patients. Although the sample of Kendler et al. was recruited without regard to treatment response, 20 of these subjects later participated in our protocol reported here. In the 35 nonoverlapping subjects, the risk was 8.0%, a rate similar to that of the total sample of Kendler et al. and substantially lower than the 16.2% morbid risk found in relatives of treatment-nonresponsive patients in the present group of patients (recalculated using the Weinberg abridged method). The 8.0% morbid risk from the modified sample of Kendler et al. is markedly higher than the responders' 3.5% (also recalculated). Although further investigation is required, this earlier study supports the possibility that "familial schizophrenia" as defined by a first-degree relative with schizophrenia or a schizophrenia spectrum disorder is less likely to be treatment responsive.

The relationship between VBR and treatment response has not been clear. Most studies suggest no relationship (16; unpublished 1982 paper by D.R. Weinberger et al.), but some rigorously conducted investigations (10-12) would indicate that patients with the largest VBRs are less likely to be treatment responsive. Schizophrenic patients included in the present study are part of a larger series of patients who have been compared with normal control subjects (31) and found to have significantly larger VBRs than age-matched control subjects. Hence, the absence of a relationship between VBR and treatment response in the present group of patients is not due to the fact that the population investigated did not demonstrate this anatomical abnormality. However, it is conceivable that this smaller subset of patients (i.e., those who participated in the treatment protocol) reduced the likelihood of detecting a relationship between VBR and treatment response.

The only baseline symptom clusters associated with neuroleptic response were activation and hostile-suspiciousness. Severity of positive symptoms, sometimes thought to be indicative of a clinical response (13), was not predictive for the present group of patients, nor were baseline levels of negative symptoms, thought disturbance, anxious-depression, and anergia. Those symptoms most responsive to the effects of haloperidol were positive symptoms—activation and hostile-suspiciousness. Negative symptoms—anergia and thought disturbance—were not signifi-

cantly affected by neuroleptics even in neuroleptic responders. These effects of treatment are in agreement with previous studies suggesting greater responsivity of positive over negative symptoms (8).

Finally, the implications of the relationship between family history and haloperidol responsiveness for biological conceptualizations of schizophrenia need to be addressed. Perhaps these data point toward the possibility that patients with familial schizophrenia do not necessarily have a hyperdopaminergic state underlying their symptoms. On the other hand, it is equally possible that such patients' symptoms may still have a dopaminergic mechanism, but other factors make them unresponsive to the biological processes mediating the therapeutic effects of neuroleptics.

REFERENCES

- Goldberg S: Drug and psychosocial therapy in schizophrenia: current status and research needs. Schizophr Bull 1980; 6:117– 121
- Baron M, Gruen R, Rainer JD, et al: A family study of schizophrenic and normal control probands: implications for the spectrum concept of schizophrenia. Am J Psychiatry 1985; 142:447-455
- Kendler KS, Masterson CC, Ungaro R, et al: A family history study of schizophrenia-related personality disorders. Am J Psychiatry 1984: 141:424

 427
- 4. Kety SS, Rosenthal D, Wender PH, et al: Mental illness in the biological and adoptive families of adopted individuals who have become schizophrenic: a preliminary report based on psychiatric interviews, in Genetic Research in Psychiatry. Edited by Fieve RR, Rosenthal D, Brill H. Baltimore, Johns Hopkins University Press, 1975
- Kendler KS, Gruenberg AM, Strauss JS: An independent analysis of the Copenhagen sample of the Danish adoption study of schizophrenia, II: the relationship between schizotypal personality disorder and schizophrenia. Arch Gen Psychiatry 1981; 38:982-984
- Andreasen NC, Endicott J, Spitzer RL, et al: The family history method using diagnostic criteria: reliability and validity. Arch Gen Psychiatry 1977; 34:1220–1235
- 7. Andreasen NC, Rice J, Endicott J, et al: The family history approach to diagnosis. Arch Gen Psychiatry 1986; 43:421-429
- Johnstone EC, Crow TJ, Frith CD, et al: Mechanism of the antipsychotic effect in the treatment of acute schizophrenia. Lancet 1978; 1:848-851
- Crow TJ: Molecular pathology of schizophrenia: more than one disease process? Br Med J 1980; 280:1–9
- Weinberger DR, Bigelow LB, Klerman JE, et al: Cerebral ventricular enlargement in chronic schizophrenia: an association with poor response to treatment. Arch Gen Psychiatry 1980; 37:11-13
- 11. Schulz SC, Sinicrope P, Kishore P, et al: Treatment response and

- ventricular brain enlargement in young schizophrenic patients. Psychopharmacol Bull 1983; 19:510-512
- Luchins DJ, Lewine RRJ, Meltzer HY: Lateral ventricular size, psychopathology and medication response in the psychoses. Biol Psychiatry 1984; 19:29

 44
- Crow TJ: Two dimensions of pathology in schizophrenia: dopaminergic and non-dopaminergic. Psychopharmacol Bull 1982; 3:57-63
- 14. Johnstone EC, Crow TJ, Frith CD, et al: Cerebral ventricular size and cognitive impairment in chronic schizophrenia. Lancet 1976; 2:924–926
- Weinberger DR, Torrey EF, Neophytides AN, et al: Lateral cerebral ventricular enlargement in chronic schizophrenia. Arch Gen Psychiatry 1979; 36:735-739
- Nasrallah HA, Kuperman S, Hamra BJ, et al: Clinical differences between schizophrenic patients with and without large cerebral ventricles. J Clin Psychiatry 1983; 44:407–409
- 17. Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria (RDC) for a Selected Group of Functional Disorders, 3rd ed. New York, New York State Department of Mental Hygiene, Biometrics Research, 1972
- 18. Feighner JP, Robins E, Guze SB, et al: Diagnostic criteria for use in psychiatric research. Arch Gen Psychiatry 1978; 35:837–844
- Endicott J, Spitzer RL: A diagnostic interview: the Schedule for Affective Disorders and Schizophrenia (SADS). Arch Gen Psychiatry 1978; 35:837–843
- Thompson WD, Weissman MM: Quantifying lifetime risk of psychiatric disorder. J Psychiatr Res 1981; 16:113–126
- 21. Lee E, Desu M: A computer program for comparing k samples with right-censored data. Computer Programs in Biomedicine 1972; 2:315–321
- Dixon WJ (ed): BMDP Statistical Software. Berkeley, University of California Press, 1985
- Overall JE, Klett CJ: Applied Multivariate Analysis. New York, McGraw-Hill, 1972
- Sokal RR, Rohlf JF: Biometry: The Principles and Practice of Statistics in Biological Research, 2nd ed. San Francisco, WH Freeman, 1981
- Bleuler M: The long-term course of the schizophrenic psychoses. Psychol Med 1974; 4:244–253
- Ciompi L: Catamnestic long-term study on the course of life and aging of schizophrenics. Schizophr Bull 1980; 6:606–618
- Ciompi L: The natural history of schizophrenia in the long term. Br J Psychiatry 1980; 136:413–420
- Hughes JS, Little JC: An appraisal of the continuing practice of prescribing tranquillizing drugs for long-stay psychiatric patients. Br J Psychiatry 1967; 113:867–873
- Letemendia FJJ, Harris AD: Chlorpromazine and the untreated chronic schizophrenic: a long-term trial. Br J Psychiatry 1967; 113:950-958
- Gottesman II, Shields J: Contributions of twin studies to perspectives on schizophrenia, in Contributions to the Psychopathology of Schizophrenia. Edited by Maher BA. New York, Academic Press, 1977
- 31. Losonczy MF, Song IS, Mohs RC, et al: Correlates of lateral ventricular size in chronic schizophrenia, I: behavioral and treatment response measures. Am J Psychiatry 1986; 143:976–981

A Relationship Between Anatomical and Physiological Brain Pathology in Schizophrenia: Lateral Cerebral Ventricular Size Predicts Cortical Blood Flow

Karen Faith Berman, M.D., Daniel R. Weinberger, M.D., Richard C. Shelton, M.D., and Ronald F. Zec, Ph.D.

The authors studied the relationship between lateral cerebral ventricular size and regional cerebral blood flow during mental activation in 30 patients with schizophrenia. Patients with large ventricles had diffusely lower cortical gray matter blood flow than patients with small ventricles. In addition, an inverse correlation between ventricular size and prefrontal blood flow was observed while patients were attempting to solve a neuropsychological test specifically related to the prefrontal cortex. These data suggest that structural brain pathology impairs prefrontal physiology in schizophrenia, implicating a neural mechanism for the intellectual deficits characteristic of this disorder.

(Am J Psychiatry 1987; 144:1277-1282)

S ince the early 1900s, when Kraepelin used the term "dementia praecox" (1) to describe the illness we now call schizophrenia, it has been recognized that many patients with this disorder suffer from disabling intellectual impairment (1-4). Recently, two seemingly disparate research findings based on new approaches to the direct observation of the brain in schizophrenia have been linked to defects in problem solving and abstract reasoning, neuropsychological deficits that are especially common in this illness. First, enlargement of the lateral ventricles, a sign of structural brain pathology that can be demonstrated by X-ray computed axial tomography (CAT), has been found to be more prevalent in those patients who have these cognitive deficits (5). (See reference 6 for a review of CAT scan studies of schizophrenia.) Although ventricular enlargement on CAT scan may reflect pathology at any site in the

Presented in part at a New Research session of the 138th annual meeting of the American Psychiatric Association, Dallas, May 18–24, 1985. Received Dec. 8, 1986; revised April 23, 1987; accepted May 28, 1987. From the Clinical Brain Disorders Branch, Intramural Research Program, National Institute of Mental Health, St. Elizabeths Hospital. Address reprint requests to Dr. Weinberger, William A. White Bldg., St. Elizabeths Hospital, Washington, DC 20032

The authors thank Mary K. Iadarola and Naomi R. Driesen for technical assistance and Robert Rawlings for statistical consultation.

brain, recent post-mortem neuropathological studies of schizophrenia not only have confirmed increased lateral ventricular size (7) but also have shown anatomical pathology of periventricular limbic and diencephalic structures, including the hypothalamus (8), the amygdala (9), the hippocampal formation (7, 9, 10), the medial pallidum (7, 9), and the substantia nigra (11). This suggests that the finding of enlarged lateral ventricles on CAT scan in schizophrenia reflects such subcortical structural pathology. The second research finding, that of lower metabolic activity of the prefrontal cortex as noted by in vivo studies of cortical blood flow (12–19) and glucose metabolism (20–22), is a sign of physiological pathology that also has been associated with cognitive deficits similar to those linked to ventricular enlargement (18, 19).

It has not been clear how, or even whether, these neuroanatomical and pathophysiological findings are directly related to each other. Elucidation of the interactions of these findings may provide a neurobiological basis for understanding the cognitive impairments that characterize this illness. In this paper we present evidence that in schizophrenia increased lateral ventricular size and decreased prefrontal physiological activity are directly linked and that this relationship may represent a pathophysiological mechanism for the dementia of dementia praecox.

METHOD

Subjects for these studies were 30 patients (26 men and four women; mean age=27.8 years, range=18-42 years) who fulfilled *DSM-III* criteria for chronic schizophrenia. They were housed on research wards of the National Institute of Mental Health (NIMH) at St. Elizabeths Hospital, Washington, D.C. NIMH research patients tend to be moderately to severely ill, to have shown an incomplete response to conventional treatment, and to require frequent institutional care. Each patient had been treated with standard doses of neuroleptic medications (24 patients received 0.4 mg/kg of haloperidol per day and the remainder received standard doses of other agents) for at least 4 weeks, and each subject gave written consent before regional

cerebral blood flow and CAT scan studies. Regional cerebral blood flow data for 23 of the patients have been previously reported (19).

CAT scans were carried out on a fourth-generation high-resolution CAT scanner. An investigator who was unaware of the regional cerebral blood flow data employed a fixed-arm planimeter to measure lateral ventricular size on the transparent films using a modification (23) of the ventricle-brain ratio (VBR) method of Synek and Reuben (24).

We used the ¹³³Xe inhalation method (25-29) to measure regional cerebral blood flow, an indicator of cortical metabolism and neuronal activity (30-33). We have instituted several modifications in the application of this technique; these are detailed elsewhere (18). They include a method for reproducible placement of extracranial radiation detectors for repeated studies and a method for determining the approximate locations of the detectors with respect to the cortex. During the first minute of each measurement, subjects inhaled trace amounts of ¹³³Xe gas mixed with room air. The clearance of radioactivity from 32 cortical areas was monitored for the ensuing 11 minutes with 32 collimated sodium iodide scintillation detectors arrayed radially about both hemispheres. Gray matter (fastclearing) regional cortex blood flow was calculated as the initial slope (IS) of ¹³³Xe clearance (34). Blood flow data were analyzed by an investigator who was unaware of the sizes of the patients' lateral ventricles.

Each subject underwent three regional cerebral blood flow measurements separated by at least 30 minutes and carried out during a single morning or afternoon session. After an initial resting-state measurement, which was done to acclimate subjects to testing conditions, each subject then had blood flow determined while performing two different cognitive activation tasks, both detailed elsewhere (18, 19). One was a problem-solving test linked specifically to prefrontal cortical activity; the other did not selectively involve the prefrontal cortex. The task that specifically engaged the prefrontal cortex (18, 19) was an automated version of the Wisconsin Card Sort; the nonprefrontally specific task was a similarly automated, simple numbers-matching task. Patients with schizophrenia (18, 19, 35, 36), like those with gross dorsolateral prefrontal lesions (37-39), show consistent cognitive deficits on the Wisconsin Card Sort. Performing this task has also been shown to physiologically activate the dorsolateral prefrontal cortex in a specific manner in normal individuals (18, 19). The order of presentation of the two tasks was counterbalanced across subjects.

Regional cerebral blood flow values were corrected 3% for each 1 mm of mercury change in partial pressure of carbon dioxide (40) from a standard of 40 mm. For statistical analysis, the 32 regional blood flow values for each procedure were collapsed into five functionally related cortical areas (18): prefrontal (primarily consisting of the dorsolateral prefrontal association cortex), precentral (including the motor and

premotor cortex), temporal, parietal, and parietooccipital. The blood flow value for each region was the mean of the individual values it comprised. A popular approach to the analysis of regional cerebral blood flow and positron emission tomography data that has been used by many investigators to control for large interindividual variance (12-22, 41) is to correct each individual's regional blood flow values to his or her mean whole-brain or posterior blood flow. In keeping with this approach, we calculated a prefrontal index (or measure of relative prefrontal activity) as follows (18, 19). Each subject's prefrontal blood flow value was normalized to (i.e., was considered as a ratio of) his or her mean nonfrontal blood flow. A precentral index (relative precentral activity) was similarly calculated. In the present study both absolute and relative blood flow data were used in separate analyses.

Multivariate analysis of variance was done to compare regional blood flow values between patients with large ventricles and those with small ventricles. The relationship between regional cerebral blood flow and lateral ventricular size was further examined with several different correlational models. In one model Pearson's product-moment correlation coefficient with and without partial correlations (42) was applied to whole-brain gray matter blood flow and regional blood flow values, and in another model the correlations between VBR and regional blood flow indexes were determined.

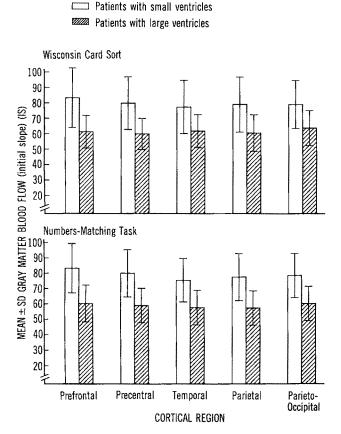
RESULTS

Absolute Regional Cerebral Blood Flow Data

The 15 patients with larger ventricles (VBR greater than 5.15, the median value) had lower regional cerebral blood flow than did the 15 patients with smaller ventricles (figure 1). A significant inverse correlation between VBR and whole-brain gray matter blood flow was seen in both the numbers-matching and card-sort testing conditions (figure 2). Moreover, negative correlations were observed between ventricle size and blood flow for each cortical region (table 1).

As expected, regional cerebral blood flow values for the five cortical areas were highly intercorrelated (r>.9, N=30, p<.0001), and they also correlated with mean whole-brain blood flow (r>.9, N=30, p< .0001). Therefore, to distinguish the relationships between ventricular size and mean whole-brain blood flow from those between ventricular size and regional flow, we calculated partial correlations of ventricular size with regional blood flow for the five cortical areas, holding mean whole-brain blood flow constant (table 2). With the correlation with mean whole-brain blood flow thus statistically partialed out, the relationships of ventricular size to blood flow for the five cortical regions were all nonsignificant during the nonprefrontal numbers-matching task. During the Wisconsin Card Sort, although the correlations between ventric-

FIGURE 1. Regional Cerebral Blood Flow During Two Cognitive Tasks in Schizophrenic Patients With Small (N=15) or Large (N=15) Ventricles^a



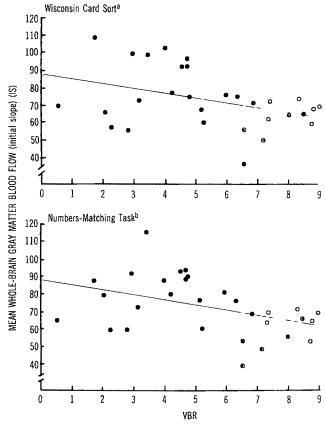
^aUnivariate analyses of variance for each cortical region were significant for both tasks (F>9.39, df=1, 28, p<.005), as were multivariate analyses of variance considering all five regions together (Wilks' lambda>0.58, F>3.4, df=5, 24, p<.018).

ular size and precentral, temporal, and parietal regions disappeared on partialing out mean whole-brain blood flow, a negative correlation between ventricular size and prefrontal blood flow persisted (table 2). Although a weaker trend toward a correlation between ventricular size and parieto-occipital blood flow also remained, this relationship reversed direction (i.e., became positive) as a result of the partial correlation procedure and, thus, does not have the same meaning as the correlation with prefrontal blood flow.

Relative Regional Cerebral Blood Flow Data

The relative regional flow data approach yielded a restricted relationship between regional cerebral blood flow and ventricular size similar to that observed with the partial correlation method. Ventricular size did not correlate significantly with the precentral index during either of the two tasks (for the numbers-matching task, r<-.17; for the card sort, r<-.28). Although the prefrontal index did not correlate with ventricular size during the numbers-matching task, an inverse relation-

FIGURE 2. Relationship Between Ventricle-Brain Ratio (VBR) and Regional Cerebral Blood Flow During Two Cognitive Tasks in 30 Schizophrenic Patients



^ar=-.40, N=30, p<.03. ^br=-.43, N=30, p<.02.

TABLE 1. Correlations Between Ventricular Size and Gray Matter Blood Flow During Two Cognitive Tasks in 30 Schizophrenic Patients

Cortical Region	Numbers-Ma Test	Wisconsin Card Sort		
	r	p	r	р
Prefrontal	45	01	45	.01
Precentral	−.42 .	.02	41	.02
Temporal	41 .	03	36	.05
Parietal	43 .	.02	39	.04
Parieto-occipital	39 .	04	33	.08

ship between these two variables was noted during the Wisconsin Card Sort (figure 3). Inspection of figure 3 reveals that being engaged in the Wisconsin Card Sort reduced the variance in relative prefrontal activity, i.e., in the prefrontal index.

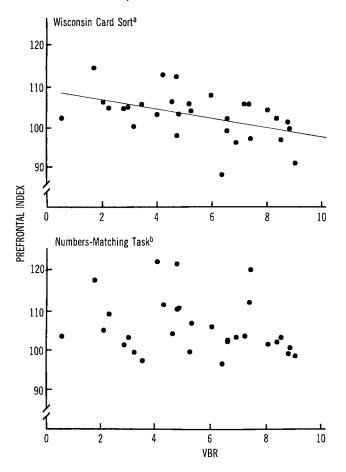
DISCUSSION

We have found that schizophrenic patients with large ventricles had diffusely lower cortical gray matter

TABLE 2. Partial Correlations Between Ventricular Size and Gray Matter Blood Flow (With Mean Whole-Brain Blood Flow Held Constant) During Two Cognitive Tasks in 30 Schizophrenic Patients

	Numbers-l Tes		Wisconsin Card Sort		
Cortical Region	r	p	r	p	
Prefrontal	16	.42	35	.06	
Precentral	.06	.76	11	.57	
Temporal	.04	.86	19	.33	
Parietal	04	.8 <i>5</i>	.12	.55	
Parieto-occipital	.18	.36	.32	.09	

FIGURE 3. Relationship Between Ventricle-Brain Ratio (VBR) and Relative Prefrontal Blood Flow (Prefrontal Index) During Two Cognitive Tasks in 30 Schizophrenic Patients



^ar=-.50, N=30, p<.01. ^br=-.32, N=30, p<.09.

blood flow and, presumably, metabolic activity than patients with small ventricles. Morever, blood flow values for all cortical regions correlated inversely with lateral ventricular size. In addition to these general findings, there appeared to be a complex interaction between structural pathology, regional cortical physiology, and cognitive function in these patients. When the relationship between VBR and mean whole-brain blood flow was partialed out, an inverse correlation

between ventricular size and regional cerebral blood flow remained only for the prefrontal cortex, and this relationship existed only during a specific cognitive task, the Wisconsin Card Sort. An analogous finding emerged from the analysis of the prefrontal indexventricular size predicted relative prefrontal flow only during the Wisconsin Card Sort condition. Thus, the results of two separate approaches, one using partial correlations and another using a relative regional flow (index) analysis, supported the notion that performing a cognitive task dependent on prefrontal neural processing (the Wisconsin Card Sort) reveals a relationship between putative subcortical pathology and prefrontal cortical dysfunction in schizophrenia which is most marked in prefrontal association areas and which is not seen during less regionally specific cognition.

These observations suggest that during a specific prefrontally mediated behavior (i.e., the Wisconsin Card Sort), a relationship between prefrontal blood flow and ventricular size emerged independent of mean whole-brain blood flow; however, the correlations for other areas were not independent. In contrast, during the nonprefrontally mediated behavior (i.e., the numbers-matching test), the relationship between mean whole-brain blood flow and ventricular size accounted for all the regional correlations. In other words, while the pathology responsible for large ventricles in schizophrenia affects brain physiology in general, it appears to have an additional selective impact on prefrontal physiology that is most apparent when prefrontal activity is specifically provoked.

Although the present study cannot be taken as proof of causality, one mechanistic interpretation of these data is that performing the Wisconsin Card Sort places a heavy physiological load on the prefrontal cortex. The response to this challenge depends on the functional integrity of certain neocortical-subcortical connectivities, and, in light of and in proportion to the pathology of this system, this response is dysfunctional in schizophrenia. The relevant pathoanatomical substrates may include periventricular limbic and diencephalic areas (as implicated by the CAT scan [5, 6] and post-mortem [7–11] studies mentioned earlier) as well as the prefrontal cortex. Structural pathology of the latter has also been observed in vivo with CAT scan (unpublished paper of Shelton et al.) and magnetic resonance imaging (43) as well as in a recent controlled post-mortem study (44). It is as yet impossible to determine whether pathology in any of these sites is primary and in the others secondary or whether the whole system is involved by a more generalized process. In this study sample, however, there was no relationship between degree of prefrontal cortical atrophy (the atrophy rating scale used is described in an unpublished paper by Shelton et al.) and lateral ventricular size (r < .01, p > .9). Since there are dense reciprocal connections between the limbic system and the diencephalon and the prefrontal cortex (45, 46), it is not surprising that pathology of the former would affect the function of the latter and vice versa.

Although the pathoanatomical substrate for large ventricles in schizophrenia is still uncertain, an increasing body of post-mortem data suggests that it is related to periventricular limbic and diencephalic pathology (47). If this is ultimately confirmed, then the data presented here may represent direct experimental evidence of an important role for the prefrontal cortex, the periventricular limbic and diencephalic structures, and the neuronal circuitry connecting these areas in schizophrenia. Insofar as large ventricles represent a marker for subcortical anatomical pathology in schizophrenia, the degree of this subcortical pathology predicts basal cortical blood flow and also the ability to augment cognitively linked prefrontal blood flow and, presumably, prefrontal intellectual function. A broader clinical implication of these findings is that patients with this illness are most likely to be behaviorally abnormal when there is particular demand for prefrontally mediated behavior—for example, when it is necessary to organize, plan for the future, learn from experience, solve problems, exercise critical judgment, introspect, etc. Such occasions are often cited as the most difficult for patients with schizophrenia (1-4) and as the ones with which they require the most assistance.

REFERENCES

- 1. Kraepelin E: Psychiatrie, 6th ed. Leipzig, Barth, 1919
- Taylor MA, Abrams R: Cognitive impairment in schizophrenia. Am J Psychiatry 1984; 141:196–201
- Seidman LJ: Schizophrenia and brain dysfunction: an integration of recent neurodiagnostic findings. Psychol Bull 1983; 94: 195–238
- Goldberg TE, Weinberger DR: Methodological issues in the neuropsychological approach to schizophrenia, in The Neurology of Schizophrenia. Edited by Nasrallah HA, Weinberger DR. New York, Elsevier/North Holland, 1986
- Zec RF, Weinberger DR: The relationship between CT scan findings and neuropsychological performance in chronic schizophrenia. Psychiatr Clin North Am 1985; 9:49-61
- Shelton RC, Weinberger DR: X-ray computerized tomography studies in schizophrenia: a review and synthesis, in The Neurology of Schizophrenia. Edited by Nasrallah HA, Weinberger DR. New York, Elsevier/North Holland, 1986
- Brown R, Colter N, Corsellis JAN, et al: Postmortem evidence of structural brain changes in schizophrenia. Arch Gen Psychiatry 1986; 43:36–42
- 8. Lesch A, Bogerts B: The diencephalon in schizophrenia: evidence for reduced thickness of the periventricular grey matter. Eur Arch Psychiatry Neurol Sci 1984; 234:212–219
- Bogerts B, Meertz E, Schonfeldt-Bausch R: Basal ganglia and limbic system pathology in schizophrenia: a morphometric study. Arch Gen Psychiatry 1985; 42:784-791
- Kovelman JA, Scheibel AB: A neurohistological correlate of schizophrenia. Biol Psychiatry 1984; 19:1601–1621
- Bogerts B, Hantsch J, Herzer M: A morphometric study of the dopamine containing cell groups in the mesencephalon of normals, Parkinson patients and schizophrenics. Biol Psychiatry 1983; 18:951–969
- Ingvar DH, Franzen G: Abnormalities of cerebral blood flow distribution in patients with chronic schizophrenia. Acta Psychiatr Scand 1974; 50:425-462
- 13. Ingvar DH, Franzen G: Distribution of cerebral activity in chronic schizophrenia. Lancet 1974; 2:1484–1486
- Franzen G, Ingvar DH: Absence of activation in frontal structures during psychological testing of chronic schizophrenics. J Neurol Neurosurg Psychiatry 1975; 38:1027–1032

- Franzen G, Ingvar DH: Abnormal distribution of cerebral activity in chronic schizophrenia. J Psychiatr Res 1975; 12: 199-214
- Ariel RN, Golden CJ, Berg RA, et al: Regional cerebral blood flow in schizophenics: tests using the xenon Xe 133 inhalation method. Arch Gen Psychiatry 1983; 40:258–263
- Kurachi M, Kobayashi K, Matsubara R, et al: Regional cerebral blood flow in schizophrenic disorders. Eur Neurol 1985; 24: 176–181
- Weinberger DR, Berman KF, Zec RF: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia, i: regional cerebral blood flow (rCBF) evidence. Arch Gen Psychiatry 1986; 43:114–125
- Berman KF, Zec RF, Weinberger DR: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia, II: role of neuroleptic treatment, attention, and mental effort. Arch Gen Psychiatry 1986; 43:126–143
- Buchsbaum MŚ, Ingvar D, Kessler R, et al: Cerebral glucography with positron tomography. Arch Gen Psychiatry 1982; 39:251–259
- Farkas T, Wolf AP, Jaeger J, et al: Regional brain glucose metabolism in chronic schizophrenia. Arch Gen Psychiatry 1984; 41:293–300
- 22. Buchsbaum MS, DeLisi LE, Holcomb HH, et al: Anteroposterior gradients in cerebral glucose use in schizophrenia and affective disorders. Arch Gen Psychiatry 1984; 41:1159–1166
- 23. Weinberger DR, DeLisi LE, Perman GP, et al: Computer tomography in schizophrenia and other acute psychiatric disorders. Arch Gen Psychiatry 1982; 39:778–783
- Synek VM, Reuben JR: The ventricular-brain ratio using planimetric measurements of EMI scans. Br J Radiol 1976; 49:233

 237
- Obrist WD, Thompson HK, King HC, et al: Determination of regional cerebral blood flow estimated by inhalation of ^{1,33}xenon. Circ Res 1967; 20:124–135
- Obrist WD, Thompson HK, Wang HS, et al: A simplified procedure for determining fast compartment rCBF by ¹³³xenon inhalation, in Brain and Blood Flow. Edited by Russell RWR. London, Pitman, 1971
- Obrist WD, Thompson HK, Wang HS, et al: Regional cerebral blood flow estimated by 133xenon inhalation. Stroke 1975; 6: 245-256
- 28. Risberg J, Ali ZA, Wilson EM, et al: Regional cerebral blood flow by 133xenon inhalation. Stroke 1975; 6:142-148
- Deshmukh VD, Meyer JS: Noninvasive Measurement of Cerebral Blood Flow in Man. Englewood Cliffs, NJ, Prentice-Hall, 1978
- Raichle ME, Grubb RL, Gado MH, et al: Correlation between regional cerebral blood flow and oxidative metabolism. Arch Neurol 1976; 33:523–526
- 31. Sokoloff L: Relationships among local functional activity, energy metabolism, and blood flow in the central nervous system. Fed Proc 1981; 40:2311–2316
- 32. Siesjo BK: Cerebral circulation and metabolism. J Neurosurg 1984; 60:883–908
- Kety SS: Basic principles for the quantitative estimation of regional cerebral blood flow, in Brain Imaging and Brain Function. Edited by Sokoloff L. New York, Raven Press, 1985
- Obrist WD, Wilkinson WE: The noninvasive Xe13.3 method: evaluation of CBF indices, in Cerebral Circulation. Edited by Beg A, Geraud G. Amsterdam, Elsevier/North Holland, 1980
- Malmo HB: On frontal lobe functions. Cortex 1974; 10:231– 237
- Kolb B, Whishaw IQ: Performance of schizophrenic patients on tests sensitive to left or right frontal, temporal, and parietal function in neurological patients. J Nerv Ment Dis 1983; 171: 435–443
- Milner B: Effects of different brain lesions on card sorting. Arch Neurol 1963; 9:100–110
- 38. Milner B: Interhemispheric differences in the localization of psychological processes in man. Br Med Bull 1971; 27:272–277
- 39. Milner B, Petrides M: Behavioral effects of frontal lobe lesions in man. Trends in Neurosciences 1984; 7:403-407

- Gur RE, Skolnick BE, Gur RC, et al: Brain functions in psychiatric disorders, I: regional cerebral blood flow in medicated patients. Arch Gen Psychiatry 1983; 40:1250-1254
- DeLisi LE, Buchsbaum MS, Holcomb HH, et al: Clinical correlates of decreased anteroposterior metabolic gradients in positron emission tomography (PET) of schizophrenic patients. Am J Psychiatry 1985; 142:78-81
- Snedecor GW, Cochran WG: Statistical Methods, 7th ed. Ames, Iowa State University Press, 1980, pp 361–363
- 43. Andreasen NC, Nasrallah HA, Dunn V, et al: Structural abnormalities in the frontal system in schizophrenia. Arch Gen
- Psychiatry 1986; 43:136-144
- Benes FM, Davidson J, Bird ED: Quantitative cytoarchitectural studies of the cerebral cortex of schizophrenics. Arch Gen Psychiatry 1986; 43:31-35
- 45. Fuster J: The Prefrontal Cortex. New York, Raven Press, 1980
- Nauta WJH: The pattern of the frontal lobe: a reinterpretation.
 J Psychiatr Res 1971; 8:167–187
- 47. Kirch DG, Weinberger DR: Post-mortem histopathological findings in schizophrenia, in The Neurology of Schizophrenia. Edited by Nasrallah HA, Weinberger DR. New York, Elsevier/North Holland, 1986

Foundations' Fund Prize for Research in Psychiatry

The American Psychiatric Association takes pleasure in inviting submissions for the eleventh annual Foundations' Fund Prize for Research in Psychiatry.

Candidates for this prize should be citizens of the United States or Canada and should be nominated by a sponsor. Sponsors should be members of the American Psychiatric Association. Members of the prize board are excluded from submitting nominations.

The *sponsor* should submit a supporting letter (six copies) setting out in detail justification for the nomination and summarizing the research accomplishments of the nominee in a specific area or with a coherent theme.

The nominee should sumbit

- 1) A book or paper (six copies) or a group of representative and thematically linked books or papers (six copies) published in English (or accepted for publication) and dated within 10 years prior to the deadline of submission;
- 2) A summary statement (six copies) written by the nominee, emphasizing the principal theme running through the work, its internal cohesiveness and consistency, and scientific implications;
- 3) An up-to-date curriculum vitae (six copies);
- 4) An up-to-date bibliography (six copies).

All entries must be submitted in six complete collated sets and sent to Ira D. Glick, M.D., Chairman, Foundations' Fund Prize Board for Research in Psychiatry, American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005. Entries will be acknowledged but cannot be returned. The prize is based on a yearly competition and resubmission is permitted. The award will be presented at the Convocation of Fellows at the Association's annual meeting in May 1988.

The deadline for submission is November 1, 1987.

A Controlled Study of Lifetime Prevalence of Affective and Other Psychiatric Disorders in Bulimic Outpatients

James I. Hudson, M.D., Harrison G. Pope, Jr., M.D., Deborah Yurgelun-Todd, M.A., Jeffrey M. Jonas, M.D., and Frances R. Frankenburg, M.D.

The authors used structured diagnostic interviews to assess the lifetime prevalence of psychiatric disorders, by DSM-III criteria, among 70 women: 51 outpatients with active bulimia and 19 nonpatient subjects with remitted bulimia. Comparison groups consisted of 24 female outpatients with major depression and 28 nonpsychiatric control subjects. The active and remitted bulimic subjects closely resembled each other, with high lifetime rates of major affective disorder, anxiety disorders, and substance use disorders. Atypical depression was equally common among subjects with major affective disorder in all groups. These results are consistent with previous studies suggesting a phenomenologic relationship between bulimia and major affective disorder.

(Am J Psychiatry 1987; 144:1283-1287)

P atients with bulimia are often described as having "affective" symptoms—including depressed mood, sleep disturbance, suicidal feelings, and anxiety (1–11). Recently, several studies, using nonstructured (8, 9, 12–15) and structured (15–18) diagnostic interviews, have reported high rates of affective syndromes among bulimic patients. These results have prompted some investigators to hypothesize a link between bulimia and major affective disorder (11, 16).

However, a number of questions remain unanswered. First, is the high prevalence of affective disorder reported in bulimia an artifact of subject selection?

All studies to date have examined only bulimic patients seeking treatment—and such individuals might have higher rates of depression than those who do not seek treatment.

Second, the nature of the affective symptoms or syndromes observed in bulimia remains unclear. Are they due to the psychological or physiological effects of the eating disorder per se, as suggested be some investigators (1, 6, 7, 10)? Or do they represent symptoms of concomitant major affective disorder, as proposed by others (11, 16)?

Third, are there characteristic features of the affective disturbance in bulimic patients that differentiate them from nonbulimic patients with major affective disorder? For example, one group (4) has suggested that atypical depression may be particularly common in bulimic individuals, and another (10) has proposed that bulimic patients display a characteristic cluster of affective symptoms that are distinguishable from those exhibited by nonbulimic patients with major depression.

To investigate further the nature of the effective disturbance in bulimia, we administered structured diagnostic interviews to two groups of bulimic women: 51 bulimic patients referred to our center for treatment and 19 women with remitted bulimia who were not seeking treatment. As comparison groups, we evaluated 24 female outpatients with major depression and 28 women from a nonpsychiatric control group.

METHOD

We recruited two groups of bulimic women between the ages of 18 and 45 years. The first group, outpatients with active bulimia by DSM-III criteria (N=51), represented consecutive referrals to our center for treatment or consultation. The second group, women with remitted bulimia (N=19), was recruited chrough a newspaper advertisement offering \$25 to interview "women who have experienced bulimia (compulsive eating binges) in the past, but who have recovered." Respondents who met DSM-III criteria for bulimia by history, but who reported no eating binges for at least 6 months, were then interviewed. The mean \$5D length of remission in this group was 22.9±22.2

Copyright © 1987 American Psychiatric Association.

Presented in part at the 137th annual meeting of the American Psychiatric Association, Los Angeles, May 5–11, 1984, and at the Second International Conference on Eating Disorders, New York, April 19–20, 1986. Received Aug. 25, 1986; revised Feb. 6, 1987; accepted April 3, 1987. From the Epidemiology Laboratory, Laboratories for Psychiatric Research, McLean Hospital; the Department of Psychiatry, Harvard Medical School, Boston; and the Eating Disorders Program, Fair Oaks Hospital, Summit, N.J. Address reprint requests to Dr. Hudson, McLean Hospital, Belmont, MA 02178.

Supported in part by a Medical Foundation Research Fellowship (Dr. Hudson), a grant from the McDonnell Foundation, a grant from the R. Samuel McLaughlin Foundation, and NIMH Clinical Research Center grant MH-36224.

months (range, 6–108 months). Only one (5%) of the 19 remitted subjects reported that she was currently receiving psychotherapy, but 16 (84%) reported at least one contact with a mental health professional at some time in the past. Only six (32%) of the subjects had received any therapy specifically for bulimic symptoms. Two (11%) of the subjects reported use of psychoactive medications beyond the level of occasional sedatives: one had received lithium carbonate, and the other had received tricyclic antidepressants, neuroleptics, and carbamazepine. None of the active or remitted bulimic subjects met *DSM-III* criteria for current anorexia nervosa, although eight (16%) of the active and two (11%) of the remitted subjects had reported anorexia nervosa in the past.

Two comparison groups of nonbulimic women, 18 to 45 years of age, were also studied. The first group, patients with major depression (N=24), was composed of female outpatients, recruited from the practices of McLean Hospital psychiatrists, who met DSM-III criteria for current or past major depression. Patients with a history of bulimia or anorexia nervosa were excluded. The second group, nonpsychiatric control subjects (N=28), was recruited through a newspaper advertisement offering \$25 to interview women aged 18-45 who had a relative with rheumatoid arthritis, but who did not have rheumatoid arthritis themselves. As with the major depression group, those respondents with a history of bulimia or anorexia nervosa were excluded from the study. We chose the criterion of familial rheumatoid arthritis to recruit a nonpsychiatric control group because previous investigations (19, 20) have suggested that there is little or no familial association between rheumatoid arthritis and major affective disorder or other psychiatric disorders. We excluded subjects with rheumatoid arthritis themselves because of the possible confounding effects of active rheumatoid arthritis in particular (21, 22), or chronic illness in general (22), on the study measures. Thus, the prevalence of psychiatric disorders in the nonpsychiatric control group would be expected to be representative of the general population.

The mean±SD age for the four groups was as follows: active bulimia, 26.3±5.4 years; remitted bulimia, 25.1±3.5 years; major depression, 33.2±5.9 years; and nonpsychiatric control subjects, 30.6±8.5 years. The subjects with active bulimia and remitted bulimia were significantly younger than the subjects with major depression (p<.001, Wilcoxon rank sum test, two-tailed). The subjects with active bulimia were also significantly younger than the nonpsychiatric control subjects (p<.05, Wilcoxon rank sum test, twotailed). Percent of ideal body weight was calculated by dividing the weight of each subject by the average weight for the subject's height and age (23). The mean percent of ideal body weight for the four groups was as follows: active bulimia, 100.6±18.6%; remitted bulimia, $97.5\pm8.0\%$; major depression, $98.0\pm15.6\%$; and nonpsychiatric control subjects, 104.4±17.5%. For the subjects with active bulimia and remitted bulimia, mean age at onset of bulimia was 18.0 ± 4.6 years and 18.5 ± 3.4 years, respectively; 41 (80%) and 16 (84%), respectively, had used self-induced vomiting; and 22 (43%) and seven (37%), respectively, had used laxatives.

Subjects were interviewed with the NIMH Diagnostic Interview Schedule (DIS) (24) in order to diagnose the following current and lifetime disorders by DSM-III criteria: bipolar disorder, major depression, dysthymic disorder, panic disorder, agoraphobia, obsessivecompulsive disorder, alcohol abuse or dependence, other substance abuse or dependence, schizophrenia, and antisocial personality disorder. Questions on the DIS pertaining to somatization disorder, tobacco use disorders, and simple phobia were omitted. In addition, we administered the Atypical Depression Diagnostic Scale of Liebowitz et al. (25) and the Eating Disorders Supplement (H.G. Pope, Jr., J.I. Hudson, unpublished questionnaire), the latter a questionnaire in the format of the DIS designed to assess the diagnosis of bulimia by DSM-III criteria. All interviews were performed by one investigator (D.Y.-T.). The results of the DIS and the Atypical Depression Diagnostic Scale were reviewed by two investigators (J.I.H. and H.G.P.), who remained blind to other information on the subjects.

Differences between groups on ordinal measures were assessed with the Wilcoxon rank sum test, two-tailed; differences in proportions between groups were assessed by Fisher's exact test, two-tailed. Alpha was set at .05.

RESULTS

Table 1 presents lifetime prevalence rates of psychiatric disorders by DSM-III criteria for the active and remitted bulimic subjects. The active bulimic subjects closely resembled the remitted bulimic subjects in the rates of all psychiatric disorders, with none of the differences between these groups even approaching statistical significance. Because of their close similarity on demographic characteristics, prevalence of use of self-induced vomiting and laxatives, and past history of anorexia nervosa, as well as in lifetime prevalence rates of psychiatric disorders (table 1), the active and remitted bulimic groups were combined for subsequent analysis.

Table 2 presents lifetime prevalence rates of psychiatric disorders by *DSM-III* criteria for the bulimic subjects and the comparison groups. The bulimic subjects were similar to the depressed subjects in the prevalence of most diagnoses but displayed a significantly lower rate of panic disorder and/or agoraphobia and significantly higher rates of alcohol abuse or dependence and total substance use disorders. Compared to the nonpsychiatric control subjects, the bulimic subjects had significantly higher rates of major depression, total major affective disorder, total affective disorders, obsessive-compulsive disorder (scored

TABLE 1. Lifetime Prevalence Rates of Psychiatric Disorders by DSM-III Criteria Among Active and Remitted Bulimic Subjects

	Act Buli Subj (N=	mic ects	Buli Subj	Remitted Bulimic Subjects (N=19)	
Disorder	N	%	N	%	
Affective disorders	36	71	13	68	
Bipolar disorder	6	12	2	11	
Major depression	30	59	9	47	
Total major affective disorder	36	71	11	58	
Dysthymic disorder	0	0	2	11	
Anxiety disorders	21 ^a	41	9ª	47	
Panic disorder and/or agoraphobia	7	14	5	26	
Obsessive-compulsive disorder	17	33	6	32	
Substance use disorders.	26ª	51	8ª	42	
Alcohol abuse or dependence	20	39	5	26	
Other substance abuse or dependence	20	39	5	26	
Schizophrenia	0	0	0	0	
Antisocial personality disorder	1	2	1	5	

^aTotal represents the number of patients who had at least one diagnosis within the group of disorders. Some subjects had more than one diagnosis; hence, the total for a given class of disorders will be less than the sum for individual disorders.

only in subjects with obsessions and compulsions unrelated to food), alcohol abuse or dependence, other substance use disorders, and total substance use disorders.

In the 47 bulimic subjects with a lifetime diagnosis of major affective disorder, the onset of the affective disorder preceded the onset of the eating disorder (bulimia or, in patients with a past history of anorexia nervosa, whichever eating disorder had the earlier onset) by at least 1 year in 15 subjects (32%), occurred within the same year in 15 (32%), and followed the onset of the eating disorder by at least 1 year in 17 (36%).

Current major affective disorder was present in 57% (N=29) of the active bulimic subjects; this was significantly higher than the 16% rate (N=3) among the remitted bulimic subjects (p<.005) and the 0% rate among the nonpsychiatric control subjects (p<.001).

Of the 47 bulimic subjects with a lifetime diagnosis of major affective disorder, eight (17%) met the criteria for atypical depression. Atypical depression was present in two (8%) of the subjects with major depression and in none of the eight nonpsychiatric control subjects with a lifetime diagnosis of major affective disorder. Differences between groups in the prevalence of atypical depression were not significant.

DISCUSSION

Our findings suggest that the high prevalence of major affective disorder in bulimic individuals may not be confined to those who seek treatment. Comparing the 51 active bulimic subjects seeking treatment with the 19 remitted subjects who were not, we found that the groups closely resembled one another in lifetime

TABLE 2. Lifetime Prevalence Rates of Psychiatric Disorders by DSM-III Criteria Among Three Study Groups

	Bulim Subjec (N=7	cts	W Ma Depr	jects ith ajor ession =24)	Nonpsy- chiatric Control Subjects (N=28)	
Disorder	N	%	N	%	N	%
Affective disorders	49 ^a	70	24 ^b	100	9	32
Bipolar disorder	8	11	0	0	()	0
Major depression Total major affective	39 ^a	55	24 ^b	100	8	29
disorder '	47 ^a	67	24 ^b	100	8	29
Dysthymic disorder	2	3	0	0	1	3
Anxiety disorders Panic disorder and/or	30°	43	12 ^c	50	6	21
agoraphobia Obsessive-compulsive	12 ^d	17	10	42	4	14
disorder	23 ^a 34 ^{b, c, d}	33	6	25	2 3°	7
Substance use disorders Alcohol abuse or	-	49	5°	21	3°	11
dependence Other substance	25 ^{a, d}	36	2	8	3	11
abuse or dependence	25 ^a	36	5	21	2	7
Schizophrenia Antisocial personality	0	0	0	0	0	0
disorder	2	3	0	0	1	3

^aSignificant difference from nonpsychiatric control subjects {p<.05; all comparisons by Fisher's exact test, two-tailed).

bSignificant difference from nonpsychiatric control subjects (p<.001).

'Total represents the number of patients who had at east one diagnosis within the group of disorders. Some subjects had more than one diagnosis; hence, the total rate for a given class of disorders will be less than the sum of the rates for individual disorders.

disorders. d Significant difference from subjects with major depression (p<.05).

rates of all psychiatric disorders assessed, as well as on demographic characteristics. Thus, we combined them for subsequent analyses.

We should note, however, that although only one of the 19 remitted bulimic subjects was currently in psychiatric treatment, most of them (84%) reported at least one contact with a mental health professional at some time. Therefore, it is likely that our remitted sample is not representative of bulimic individuals in the population who have never sought treatment. Only a community survey, using standard epidemiologic techniques to sample a given catchment area, could fully resolve this question.

The 67% lifetime rate of major affective disorder observed in the combined group of 70 bulimic subjects was significantly greater than that found among the nonpsychiatric control subjects. This rate was similar to that reported in a previous study from our center that used the DIS (16), as well as to rates reported in most previous phenomenologic studies that used structured (17, 18) and nonstructured (8, 9, 14) diagnostic interviews. However, two other studies that used nonstructured (12, 13) interviews have yielded somewhat lower rates. One additional study (15), which used structured interviews, found only a 26% rate of major depression in bulimic subjects. However, that

study assessed only the current, rather than lifetime, rate of major depression, and it is thus not directly comparable to the others.

In the 47 bulimic subjects with major affective disorder, the onset of the eating disorder preceded, coincided with, or followed the onset of the affective disorder in about one-third of cases each. In addition, three (16%) of the remitted bulimic subjects presented with major affective disorder at a time when their bulimic symptoms had been absent for at least 6 months. These findings, similar to those of our previous study (16) and of other groups (8, 17), suggest that the affective disorder seen in patients with bulimia cannot be explained solely by the psychological or physiological effects of the eating disorder itself.

One report (4) has suggested that bulimic patients might characteristically show features of atypical depression as defined by Liebowitz et al. (25), with the features of sensitivity to rejection, mood reactive to environmental circumstances, hyperphagia, and hypersomnia. However, a subsequent report from the same group (17) found atypical depression in only 31% of bulimic patients with major affective disorder. We found a 17% prevalence of atypical depression among bulimic subjects with major affective disorder, a rate not significantly different from the 8% prevalence of atypical depression among the outpatients with major depression. Thus, it appears that atypical depression may not be particularly more common among bulimic women than among age-matched women with major depression. However, further studies are needed to ascertain whether particular subtypes of affective disorder or constellations of affective symptoms are more common in bulimic patients than in nonbulimic patients with depression, as some have proposed (10, 26).

With regard to anxiety disorders, the bulimic subjects exhibited a 33% lifetime rate of obsessive-compulsive disorder, which was comparable to the 47% rate found in our previous study of psychiatric disorders in bulimia (16). However, the bulimic subjects displayed only a 17% lifetime rate of panic disorder and/or agoraphobia—significantly lower than the 42% rate in the depressed comparison group in the present study and the 39% rate in our previous study. Studies of the prevalence of anxiety disorders in bulimic patients in other centers have also yielded conflicting findings, with panic disorder reported in 2% (17) to 31% (10) of the subjects and obsessive-compulsive disorder in 3% (9) and "obsessional ideas and ruminations" in 80% (10).

The 49% lifetime prevalence rate of substance use disorders observed in this study was somewhat higher than the 31% found in our previous series of bulimic patients (16) and the rates reported in other centers, which have ranged from 0% to 42% (6, 9, 13, 14, 17). The rate of alcohol abuse or dependence was significantly higher among the bulimic subjects than among the outpatients with major depression, although the 8% rate of alcohol abuse or dependence in the de-

pressed patients may not be representative of depressed patients as a whole, given evidence that major affective disorder appears to share some comorbidity with alcohol use disorders (27). Schizophrenia was absent and antisocial personality disorder was rare among all subject groups.

In conclusion, the findings of this study support a phenomenologic association between bulimia and major affective disorder. This association cannot be attributed purely to the self-selection of individuals seeking treatment or to the direct effects of the eating disorder on mood, although the possibility remains that both of these factors might contribute to the observed prevalence rates. In addition, bulimia does not appear to be closely associated with atypical depression. However, further studies will be necessary to resolve the question of whether bulimic patients characteristically exhibit a form of affective disorder distinct from that seen in nonbulimic patients with major affective disorder.

REFERENCES

- 1. Russell GFM: Bulimia nervosa: an ominous variant of anorexia nervosa. Psychol Med 1979; 9:429-448
- Pyle RL, Mitchell JE, Eckert ED: Bulimia: a report of 34 cases. J Clin Psychiatry 1981; 42:60-64
- 3. Johnson C, Larson R: Bulimia: an analysis of moods and behavior. Psychosom Med 1982; 44:341-350
- Walsh BT, Stewart JW, Wright L, et al: Treatment of bulimia with monoamine oxidase inhibitors. Am J Psychiatry 1982; 139:1629–1630
- Weiss SR, Ebert MH: Psychological and behavioral characteristics of normal-weight bulimics and normal-weight controls. Psychosom Med 1983; 45:293–303
- Fairburn CG, Cooper PJ: The clinical features of bulimia nervosa. Br J Psychiatry 1984; 144:238–246
- 7. Sabine ECJ, Wood KH, Wakeling A: Mood changes in bulimia nervosa. Br J Psychiatry 1984; 145:512-516
- Lee NF, Rush AJ, Mitchell JE: Depression and bulimia. J Affective Disord 1985; 9:231–238
- Viesselman JO, Roig M: Depression and suicidality in eating disorders. J Clin Psychiatry 1985; 46:118–124
- Cooper PJ, Fairburn CG: The depressive symptoms of bulimia nervosa. Br J Psychiatry 1986; 148:268–274
- Hudson JI, Pope HG Jr: Depression and eating disorders, in Presentations of Depression. Edited by Cameron OG. New York, John Wiley & Sons, 1987
- 12. Gwirtsman HE, Roy-Byrne P, Yager J, et al: Neuroendocrine abnormalities in bulimia. Am J Psychiatry 1983; 140:559-563
- Hatsukami DK, Eckert ED, Mitchell JE, et al: Affective disorder and substance abuse in women with bulimia. Psychol Med 1984; 14:701-714
- Stern SL, Dixon KN, Nemzer E, et al: Affective disorder in the families of women with normal weight bulimia. Am J Psychiatry 1984; 141:1224–1227
- Herzog DB: Are anorexic and bulimic patients depressed? Am J Psychiatry 1984; 141:1594–1597
- 16. Hudson JI, Pope HG Jr, Jonas JM, et al: Phenomenologic relationship of eating disorders to major affective disorder. Psychiatry Res 1983; 9:345–354
 17. Walsh BT, Roose SP, Glassman AH, et al: Bulimia and depres-
- Walsh BT, Roose SP, Glassman AH, et al: Bulimia and depression. Psychosom Med 1985; 47:123–131
- Blouin A, McAffer V, Blouin J, et al: The incidence of depression in bulimia, in Abstracts of the Second International Conference on Eating Disorder, New York. New York, Montefiore Hospital, 1986

- Blumer D, Heilbronn M: Chronic pain as a variant of depressive disease: the pain-prone disorder. J Nerv Ment Dis 1982; 170: 381–406
- Hudson JI, Hudson MS, Pliner LF, et al: Fibromyalgia and major affective disorder: a controlled phenomenology and family history study. Am J Psychiatry 1985; 142:441

 –446
- 21. Mindham RHS, Bagshaw A, James SA, et al: Factors associated with the appearance of psychiatric symptoms in rheumatoid arthritis. J Psychosom Res 1981; 25:429–435
- 22. Cassileth BR, Lusk EJ, Strouse TB, et al: Psychosocial status in chronic illness: a comparative analysis of six diagnostic groups. N Engl J Med 1984; 311:506-511
- Society of Actuaries and Association of Life Insurance Medical Directors of America: 1979 Build Study. Chicago, SAALIMDA,

- 1980
- Robins LN, Helzer JE, Croughan J, et al: NIMH Diagnostic Interview Schedule; 2nd ed. Rockville, Md, National Institute of Mental Health, 1980
- Liebowitz MR, Quitkin FM, Stewart JW, et al: Phenelzine v imipramine in atypical depression. Arch Gen Psychiatry 1984; 41:669-677
- 26. Strober M, Katz J: Depression in the eating disorders: a review and analysis of descriptive, family and biological findings, in Diagnostic Issues in Anorexia Nervosa and Bulimia Nervosa. Edited by Garner DM, Garfinkel PE. New York, Brunner/Mazel (in press)
- Schuckit MA: Genetic and clinical implications of alcoholism and affective disorder. Am J Psychiatry 1986; 143:140–147

The Arnold L. van Ameringen Award in Psychiatric Rehabilitation

The American Psychiatric Association takes pleasure in inviting nominations for the 1988 Arnold L. van Ameringen Award in Psychiatric Rehabilitation. The award was established in memory of Mr. van Ameringen who, throughout his lifetime, made many contributions to the field of mental health and especially to the psychiatric rehabilitation of the mentally ill.

The award is given annually to an individual, institution, or organization that has made an outstanding contribution to the field of psychiatric rehabilitation and care for the chronically mentally ill. The contribution may be in the area of clinical service, research, education, or advocacy, or a combination thereof. The van Ameringen award carries a \$3,500 honorarium and is presented at the Convocation of Fellows during the annual meeting of the American Psychiatric Association each May.

Nominations will be received until Oct. 15, 1987, and should include four copies of 1) a nominating letter describing why the candidate's work is worthy of the award and how it has had (will have) a lasting effect on the care of the chronically mentally ill and the field of rehabilitation psychiatry; and 2) a biographical sketch (if an individual) or descriptive literature (if an institution or organization). Nominations should be addressed to Arthur Meyerson, M.D., Chairperson, Selection Committee, Arnold L. van Ameringen Award in Psychiatric Rehabilitation, American Psychiatric Association, 1400 K St., N.W., Washington, DC 20005.

Creativity and Mental Illness: Prevalence Rates in Writers and Their First-Degree Relatives

Nancy C. Andreasen, M.D., Ph.D.

Rates of mental illness were examined in 30 creative writers, 30 matched control subjects, and the first-degree relatives of both groups. The writers had a substantially higher rate of mental illness, predominantly affective disorder, with a tendency toward the bipolar subtype. There was also a higher prevalence of affective disorder and creativity in the writers' first-degree relatives, suggesting that these traits run together in families and could be genetically mediated. Both writers and control subjects had IQs in the superior range; the writers excelled only on the WAIS vocabulary subtest, confirming previous observations that intelligence and creativity are independent mental abilities.

(Am J Psychiatry 1987; 144:1288–1292)

People have wondered whether there is a relation-ship between creativity and mental illness, or "genius and insanity" in popular parlance, at least since classical times (1). In the nineteenth century the influence of Lombroso led to speculations that genius was a "hereditary taint" transmitted in families along with mental illness (2-5). In the twentieth century this association has been supported by several techniques commonly used to examine familial transmission of various illnesses, including evaluation of first-degree relatives of creative individuals and examination of biological and nonbiological adoptive relatives of creative individuals adopted at birth (6–11). The striking number of suicides by contemporary writers has also led to renewed interest in this association. The following are only some of the writers who have died by suicide during the twentieth century: Ernest Hemingway, Sylvia Plath, John Berryman, Anne Sexton, and Virginia Woolf.

In spite of the considerable interest in this topic, quantitative studies have been sparse, and none of the published studies (apart from my own early work) has used modern diagnostic techniques developed to im-

Received Oct. 6, 1986; accepted April 13, 1987. From the Department of Psychiatry, University of Iowa College of Medicine. Address reprint requests to Dr. Andreasen, Department of Psychiatry, University of Iowa College of Medicine, 500 Newton Rd., Iowa City, IA 52242.

Copyright © 1987 American Psychiatric Association.

prove the reliability of psychiatric assessment, such as structured interviews and diagnostic criteria. Many studies have relied primarily on anecdotes; only a few have used direct personal interview of a systematically defined sample of recognized creative individuals.

Crucial questions include the following: Do creative individuals have a higher rate of mental illness? Do their first-degree relatives (parents, siblings, and offspring) have a higher rate of mental illness? Do these relatives have a higher rate of creativity? If there is a relationship between creativity and mental illness, is it a specific type of mental illness, such as schizophrenia, affective disorder, or alcoholism?

The present investigation attempted to answer some of these questions by systematically evaluating a sample of creative writers at the University of Iowa Writers' Workshop. The workshop is the oldest and most widely recognized creative writing program in the United States. Students and faculty have included such well-known writers as Philip Roth, Kurt Vonnegut, John Irving, Robert Lowell, Flannery O'Connor, and John Cheever. Since well-known writers are brought in for a semester or two each year as visiting faculty members, they represent a reasonably valid cross-section of contemporary American writers.

METHOD

During the past 15 years, 30 faculty members at the workshop were evaluated with a structured interview designed by me in order to determine their patterns of creativity, their history of mental illness, and the prevalence of these traits in first-degree relatives. (This interview was developed before more recent standard interviews such as the Schedule for Affective Disorders and Schizophrenia [SADS]. It is available from me on request.) Confidentiality about the subjects' identity was a condition for participation in this study.

Twenty-seven men and three women were studied. Their mean ±SD age was 37.47±11.49 years. The writers were matched for age, sex, and educational status to an occupationally varied sample of control subjects (hospital administrators, lawyers, social workers, etc.). The control subjects were not personally known to me and were selected because they provided a good sociodemographic match. Their mean age was 37.90±12.20 years. Psychiatric diagnoses of

TABLE 1. Lifetime Prevalence of Mental Illness in Writers and Control Subjects

		ters =30)	Sub	ntrol ejects =30)	X ²	
RDC Diagnosis	N	%	N	%	$(df=1)^a$	р
Any affective disorder	24	80	9	30	13.20	.001
Any bipolar disorder	13	43	3	10	6.90	.01
Bipolar I disorder	4	13	0	0		n.s.
Bipolar II disorder	9	30	3	10	2.60	n.s.
Major depressive disorder	11	37	5	17	2.13	n.s.
Schizophrenia	0	0	0	0		n.s.
Alcoholism	9	30	2	7	4.01	.05
Drug abuse	2	7	2	7		n.s.
Suicide	2	7	0	0		n.s.

^aEntries with no chi-square value had expected frequencies less than 5; Fisher's exact test was used in these cases.

the probands were made according to the Research Diagnostic Criteria (RDC) (12), and diagnoses of first-degree relatives were made according to the Family History Research Diagnostic Criteria (13). Cognitive function and style were evaluated in a subset of 15 writers and control subjects with the Raven Progressive Matrices (advanced set) (14) and the WAIS.

FINDINGS

Table 1 summarizes the principal findings concerning the rate of psychiatric illness in the writers and the control subjects. The rates are lifetime prevalences and therefore indicate whether the subjects had *ever* had a period of mental illness. The reliability of such lifetime estimates has been evaluated and found to be very good when structured interviews and diagnostic criteria are used (15).

Contrary to some previous speculations about a relationship between schizophrenia and creativity (16, 17), these results suggest a strong association between creativity and affective illness instead. Schizophrenia was conspicuous by its absence, while the rate of affective disorder (i.e., manic-depressive illness) was strikingly high. Eighty percent of the writers had had an episode of affective illness at some time in their lives, compared with 30% of the control subjects. A surprising percentage of the affective disorder was bipolar in nature; 43% of the writers had had some type of bipolar illness, in comparison with 10% of the control subjects. Both of these differences were statistically significant. In addition, the writers had significantly higher rates of alcoholism (30%, compared with 7% in the control subjects).

No statistically significant differences were noted in specific subtypes of affective disorder when the writers were compared with the control subjects, perhaps because the sample size was relatively small and nonparametric statistics have limited power. The differences that were not statistically significant were nevertheless clinically important. Bipolar I disorder is a

severe, although intermittent, illness characterized by episodes of depression alternating with excessive euphoria, increased energy, and poor judgment (and sometimes delusions and/or hallucinations as well); it almost invariably requires hospitalization and longterm treatment with somatic therapy. Bipolar I! disorder, characterized by milder periods of euphoria that alternate with periods of despondency and depression, also produces an instability of mood that many find painful and that usually requires somatic treatment. Major depression, the mildest of the affective disorders, is also a potentially severe illness. Two-thirds of the ill writers had received psychiatric treatment for their disorders. Further supporting the clinical importance of these affective disorders in writers is the fact that two of the 30 committed suicide during the 15 years of the study. Issues of statistical significance pale before the clinical implications of this fact.

The rates of illness for the writers were substantially higher than one might expect. The rates for the control subjects were somewhat higher than those found in epidemiologic population studies (18). Rates for the control subjects were not, however, strictly comparable with those in such epidemiologic studies, since the controls, having been sociodemographically matched to the writers, represented an educationally and occupationally advantaged sample. An association has been reported between bipolar disorder and occupational achievement (19), which might have led to a relatively higher rate of bipolar disorder in the control sample (and in the writers as well). The RDC definition of bipolar II disorder is also quite broad, which partially accounts for the high rate of bipolar II disorder.

Lombroso, Ellis, and many others (2–6) have argued that creativity and mental illness run in families and that both tendencies are hereditary. Table 2 examines the rates of mental illness in the first-degree relatives of the writers and the control subjects according to the family history technique. This technique, which involves collecting information about the family directly from the proband, rather than by interviewing all relatives personally, has respectable sensitivity and specificity (20). Nevertheless, some "cases" will not be identified through this method because of lower sensitivity, thereby leading to lower prevalence estimates. These lower prevalence estimates are presumably equally lower in relatives of writers and in relatives of control subjects, however, thereby permitting valid comparisons between the two groups of relatives. As table 2 indicates, the first-degree relatives of the writers had a disproportionately higher frequency of mental illness, particularly affective disorder. The rate of major depression was significantly higher for siblings, parents, and all relatives pooled. In addition, a higher frequency of bipolar disorder approached statistical significance when all relatives were pooled.

Since rates of affective disorder were higher for the writers, one would also expect them to be higher for their first-degree relatives, since affective disorders have a well-established familial pattern of transmis-

TABLE 2. Mental Illness in First-Degree Relatives of 30 Writers and 30 Control Subjects

All Relatives							Pare	nts		Siblings								
Family History	Wr	Of iters 116)	Con	of itrol jects 121)	.,2		Wr	Of iters =60)	Co: Sub	Of ntrol ojects =60)	.,2		Wr	Of iters =56)	Cor Sub	Of itrol jects =121)	2	
RDC Diagnosis	N	%	N	%	$(df=1)^a$	p	N	%	N	1%	$(df=1)^a$	p	N	%	N	%	$(df=1)^a$	р
Any affective disorder Bipolar disorder	21 4	18	3 0	2 0	14.21	.001 .056	10 1	7 2	1 0	2	6.41	.001 n.s.	11 3	20 5	2 0	3	6.35	.01 n.s.
Major depression Alcoholism Suicide	17 8 3	15 7 3	3 7 0	2 6 0	9.84 0.01	.01 n.s. n.s.	9 5 2	5 8 3	1 4 0	2 7 0	5.35	.05 n.s. n.s.	8 3 1	14 5 2	2 3 0	3 5 0		.05 n.s. n.s.
Any illness	49	42	10	8	34.77	.0001	25	42	5	8		.00003	24	43	5	8	17.00	.001

^aEntries with no chi-square value had expected frequencies less than 5; Fisher's exact test was used in these cases.

TABLE 3. Prevalence of Creativity in First-Degree Relatives of 30 Writers and 30 Control Subjects

Relatives'		tives riters	of Co	tives ontrol jects	y ²	
Creativity ^a	N	%	N	%	$(df=1)^{b}$	p
All relatives	116	100	121	100		
+Creative	20	33	11	18		n.s.
++Creative	12	20	5	8	4.85	.05
Total creative	32	53	16	27	9.10	.01
Parents	60	100	60	100		
+Creative	5	8	3	5		n.s.
++Creative	7	12	2	3		n.s.
Total creative	12	20	5	8	2.47	n.s.
Siblings	56	100	61	100		
+Creative	15	27	8	13	2.64	n.s.
++Creative	8	14	3	5	2.01	n.s.
Total creative	23	41	11	18	6.44	.01

^{a+}Creative=somewhat creative; ⁺⁺creative=well-recognized level of creative achievement.

sion. In order to address the issue of whether affective disorder and creativity are intertwined, we must look at patterns of creativity in family members as well. This issue is addressed in table 3. Information was collected concerning occupations, hobbies, and creative professional success among all first-degree relatives. Relatives were classified as "+creative" if they pursued occupations that would be considered somewhat creative, such as journalism or teaching music or dance. Relatives were classified as "+creative" if they had a well-recognized level of creative achievement, such as writing novels, dancing in a major company, performing as a concert artist or in a major symphony, or making a major scientific contribution such as an invention.

The total number of creative relatives was significantly higher for the writers, and it is particularly noteworthy that, when all relatives were pooled together, the difference was contributed primarily by the number of relatives who were in the ++creative category. Most of the difference between the writers and

the control subjects was contributed by the siblings; 41% of the siblings of the writers displayed some creativity, compared with 18% of the control siblings. The rate for parents was 20% versus 8%; while the rate among the parents of writers was higher, the difference did not achieve statistical significance. Table 4 portrays the intertwining of creativity and affective illness in the family members, showing the rates of creativity and illness in the families of each of the writers and control subjects. It indicates clearly that the families of the writers were riddled with both creativity and mental illness, while in the families of the control subjects much of the illness and creativity seemed to be randomly scattered.

It is perhaps noteworthy that the types of creativity observed in the relatives of the writers were far broader than literary creativity. Some relatives of creative writers were indeed also in literary fields, but many were creative in other areas, such as art, music, dance, or mathematics. This suggests that whatever is transmitted within families is a general factor that predisposes to creativity, rather than a specific giftedness in verbal areas. Further, whenever traits are transmitted familially, it is of interest to determine whether the transmission is due to social learning and modeling or to more purely genetic factors. While family studies cannot disentangle this issue to the same extent that adoption studies can, the variability in creativity in these families does suggest the possibility of some form of genetic transmission. If social learning were the sole factor involved, one would expect a preponderance of literary creativity in the families of writers. The relatively higher rate of creativity among siblings is also very slight evidence against the effect of role modeling based on parental interests and behavior.

What is the relationship between intelligence and creativity? Several studies have suggested that intelligence may be a necessary, but not sufficient, cause of creativity but that very high intelligence and high creativity are not necessarily the same (21–22). Data concerning the intelligence of the writers and the control subjects are summarized in table 5. The WAIS IQ is based on an extrapolated estimate from four

^bEntries with no chi-square value had expected frequencies less than 5; Fisher's exact test was used in these cases.

TABLE 4. Patterning of Mental Illness and Creativity in 30 Writers, 30 Control Subjects, and Their Families

		Writer		Write	r's Family	Contro	ol Subject	Control Subject's Family		
Subject Number	Subject Affective Number Disorder Bipolarity Alcoholism	Mental Illness	Creativity	Affective Disorder	Alcoholism	Mental Illness	Creativity			
1	Yes	Yes		Yes	Yes					
	Yes		Yes		Yes					
3				Yes						
2 3 4	Yes	Yes	Yes	Yes	Yes				Yes	
5	Yes	Yes				Yes				
	Yes			Yes						
6 7		Yes		Yes	Yes	Yes				
8	Yes	Yes	Yes	Yes	Yes			Yes		
9	Yes	Yes	Yes	Yes	Yes			Yes		
10	Yes	Yes	Yes	Yes	Yes					
11	Yes	Yes					Yes		Yes	
12	Yes	Yes		Yes	Yes				Yes	
13				Yes	Yes					
14	Yes							Yes		
15	Yes		Yes	Yes		Yes			Yes	
16	Yes	Yes		Yes	Yes					
17	Yes	Yes	Yes	Yes						
18	Yes					Yes				
19	Yes									
20	Yes				Yes					
21	Yes	Yes	Yes	Yes	Yes	Yes				
22	Yes					Yes	Yes	Yes		
23	Yes			Yes	Yes					
24	Yes									
2.5						Yes		Yes	Yes	
26	Yes	Yes						Yes		
27				Yes						
28						Yes			Yes	
29	Yes		Yes	Yes	Yes					
30	Yes					Yes		Yes		

TABLE 5. Scores on Intelligence Tests of 15 Writers and 15 Control Subjects

		Sc				
	Wri	ters	Control	Subjects		
Test	Mean	SD	Mean	SD	χ^2 (df=1)	p
WAIS	123.7	9.3	121.2	7.1	0.82	n.s.
Verbal IQ	126.4	10.6	122.8	3.5	1.25	n.s.
Performance IQ	116.9	13.5	116.1	13.7	0.16	n.s.
Verbal minus performance	9.5	16.6	6.7	13.4	0.51	n.s.
Similarities scale	13.8	2.4	14.3	1.7	-0.61	n.s.
Vocabulary scale	15.3	1.8	13.1	1.2	3.89	.0006
Picture completion scale	12.4	2.7	12.0	1.6	0.49	n.s.
Raven Progressive Matrices (advanced set)	25.3	7.1	25.6	7.3	-0.11	n.s.

subtests: similarities, vocabulary, picture completion, and block design. These were selected because two of these tests, similarities and vocabulary, are considered to be strong tests of verbal intelligence, while the other two, picture completion and block design, are strong tests of nonverbal visual intelligence. The Raven Progressive Matrices (advanced set) is a nonverbal IQ test designed to be culture free; it involves pattern perception of visual shapes.

As table 5 indicates, there was no difference between the writers and the control subjects on most of these measures of intelligence. The writers scored significantly higher on the vocabulary subtest of the WAIS, but this would be expected given the fact that

their life work involves a preoccupation with words. The most interesting data in table 5 are the many nonsignificant differences. Both the writers and the control subjects were intellectually talented, with full-scale IQs usually over 120. Except for their differential excellence in vocabulary, the writers performed equally well on all the WAIS subtests. They did not seem to have a preferential giftedness in verbal intelligence, although they did have a nonsignificant decrement in verbal minus performance IQ. In general, they performed equally well in all aspects of intelligence assessment.

The data from the Raven Progressive Matrices (advanced set) are particularly interesting, since this is a

purely nonverbal test consisting of 36 different patterns that must be "solved." This test is considered by neuropsychologists to be extremely difficult, and perfect scores are thought to be very infrequent. In this relatively gifted sample of individuals, however, several achieved perfect scores, including both writers and control subjects. IQ equivalents for the Raven test are not available, since the test is not adequately normed, but scores of 25 are probably more or less comparable with IQs in the 120–130 range.

These results indicate that the relatively higher rate of affective illness in the writers and their first-degree relatives was probably not an effect of intelligence, nor was the higher creativity in the relatives of writers due to higher intelligence in the writers. Apart from the factor of creativity, the writers and control subjects were closely matched on cognitive measures.

DISCUSSION

This study has some recognized limitations. The investigator was not blind to the status of the sample with respect to creativity, thereby raising the possibility of biased estimates for the relatives of the writers. When the study was initially undertaken, however, it was designed to test the hypothesis of an association between schizophrenia and creativity, since an association between creativity and affective disorder was not even suspected at that time. The observed findings were contrary to those hypothesized at the outset, a fact that enhances their credibility even though it does not eliminate the possibility of a "halo effect." The failure to directly interview all first-degree relatives is also a limitation, since direct interview usually is considered to be more valid than the family history method. This limitation is likely to produce random noise across both the writer and control samples, however. Nevertheless, the possibility must be considered that the writers were more sensitive reporters of affective illness and creativity in their first-degree relatives, since they possessed these traits themselves. A third limitation is that the study was limited to writers; the findings are not necessarily generalizable to other types of creativity.

Overall, this investigation indicated that there is a close association between mental illness and creativity, as assessed in a sample of creative writers. Contrary to earlier hypotheses about a relationship between creativity and schizophrenia, the type of mental illness was predominantly affective disorder, with a possible tendency toward the bipolar subtype. Earlier hypotheses about a relationship with schizophrenia were based on the recognition that schizophrenia often leads to unusual perceptions, which could predispose to creativity; in most instances, however, perceptions in schizophrenia tend to be more bizarre than original, and many schizophrenic patients suffer from cognitive impairments that are likely to inhibit creativity (23). Schizophrenia also tends to be a chronic illness, while

affective disorder is usually episodic, leaving most people with long periods of normality. Most writers reported that they tended to write during these normal periods rather than during highs or lows.

Reasons for the relationship between affective disorder and creativity need further exploration. Nevertheless, these results do suggest that affective disorder may produce some cultural advantages for society as a whole, in spite of the individual pain and suffering that it also causes. Affective disorder may be both a "hereditary taint" and a hereditary gift.

REFERENCES

- Aristotle: Problemata, vol 2. Translated by Hetts WS. Cambridge, Cambridge University Press, 1953
- 2. Lombroso C: The Man of Genius. London, Walter Scott, 1891
- 3. Galton F: Hereditary Genius. London, Macmillan, 1892
- Hirsch W: Genius and Degeneration. New York, Appleton, 1896
- 5. Lange-Eichman W: The Problem of Genius. London, Kegan Paul, Trench, & Trubner, 19316. Ellis HA: A Study of British Genius. London, Houghton-
- Ellis HA: A Study of British Genius. London, Houghton Mifflin, 1926
- Juda A: The relationship between highest mental capacity and psychic abnormalities. Am J Psychiatry 1949; 106:296–307
- McNeil TF: Prebirth and postbirth influence on the relationship between creative ability and recorded mental illness. J Pers 1971; 39:391–406
- Andreasen NC, Canter A: The creative writer: psychiatric symptoms and family history. Compr Psychiatry 1974; 15:123– 131
- Andreasen NC, Canter A: "Genius and insanity revisited": psychiatric symptoms and family history in creative writers, in Life History Research in Psychopathology, vol 4. Edited by Wirt R, Winokur G, Roth M. Minneapolis, University of Minnesota Press, 1975
- 11. Holden C: Manic depression and creativity. Science 233:725, 1986
- Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria: rationale and reliability. Arch Gen Psychiatry 1978; 35:773–782
- Andreasen NC, Endicott J, Spitzer RL, et al: The reliability and validity of the family history method using Family History Research Diagnostic Criteria (FH-RDC). Arch Gen Psychiatry 1977; 34:1229–1235
- Rayen JC: Advanced Progressive Matrices. New York, Psychological Corp, 1977
- Andreasen NC, Grove WM, Shapiro RW, et al: Reliability of lifetime diagnosis: a multicenter collaborative perspective. Arch Gen Psychiatry 1981; 38:400-405
- 16. Karlsson JL: Genetic association of giftedness and creativity with schizophrenia. Hereditas 1970; 66:177-182
- Heston LL: Psychiatric disorders in foster home reared children of schizophrenic mothers. Br J Psychiatry 1966; 112:819–825
- Robins LN, Helzer JR, Weissman MM, et al: Lifetime prevalence of psychiatric disorders in three sites. Arch Gen Psychiatry 1984; 41:949–958
- 19. Woodruff RA, Robins LN, Winokur G, et al: Manic-depressive illness and social achievement. Acta Psychiatr Scand 1971; 47: 237-249
- Andreasen NC, Rice J, Endicott J, et al: The family history approach to diagnosis: how accurate and useful is it? Arch Gen Psychiatry 1986; 43:421–429
- Terman LM, Oden MH: Genetic Studies of Genius, vol 4. Stanford, Stanford University Press, 1947
- 22. MacKinnon DW: Personality and the realization of creative potential. Am Psychol 1965; 20:273-281
- 23. Andreasen NC, Powers PS: Creativity and psychosis: a comparison of cognitive style. Arch Gen Psychiatry 1974; 32:70-73

Effects of the New Economic Climate on Psychotherapeutic Practice

Paul Chodoff, M.D.

Psychotherapy, especially the intensive variety, has been put under considerable adverse pressure by changes in the economics of medicine and psychiatry. The dominance of third-party rather than out-of-pocket payment for services raises questions about the "medicality," and thus the eligibility for coverage, of some disorders treated with psychotherapy. Trends toward the "industrialization" of psychiatry threaten to curtail the independent, fee-for-service conditions that may be necessary for psychotherapeutic practice. Efforts to reassert the medicality of psychotherapeutic psychiatry are essential, even though this will be difficult to accomplish and may have some limiting effects on coverage.

(Am J Psychiatry 1987; 144:1293-1297)

F ew would deny that these are not the best of times for psychoanalysis for psychoanalysis and medical psychotherapy generally. There is more than one reason for a decline, or at least a hesitation, in the practice of psychotherapy by psychiatrists. Certainly the advance of biological methods of treatment into territories heretofore considered the domain of psychotherapy is a significant factor. It seems incontrovertible that the changing economics of medicine and psychiatry are also exacting their toll. In the twentieth century and especially in recent years, these changes have proceeded so rapidly that they have had a revolutionary impact on the way medical services are paid for in this country. In no other specialty has the effect been more profound than it has been on psychotherapeutic psychiatry, particularly the long-term intensive variety.

Received May 27, 1986; revised Oct. 8, 1986, and Feb. 17, 1987; accepted April 2, 1987. Dr. Chodoff is in private practice. Address reprint requests to him at 1904 R St., N.W., Washington, DC 20009. Copyright © 1987 American Psychiatric Association.

Freud, the originator of psychotherapy as we know it, practiced in a mode that can be described as individual, entrepreneurial, and unregulated by outside agencies. Fees were for services rendered and came from the pocket of the patient or a family member. These conditions appear to have been very suitable for the development of the new discipline of psychoanalysis and, subsequently, for its numerous derivatives. Questions about what may be called the "medicality" of some patients being treated by psychotherapeutic means did not require resolution or even very much discussion. There was no requirement to make medical diagnoses, to define medical necessity, to establish criteria for "cure" or an end point of treatment, or to differentiate between the qualifications of physicians and other purveyors of psychotherapy. As long as fees were for service rendered in an ethical and legal manner and came from the pockets of patients, these issues were a matter of agreement between doctor and patient and involved no one else. This kind of individualistic therapeutic relationship continued for several decades after psychotherapy by psychiatrists took hold in the United States, but it has been altered irrevocably by the different conditions under which psychotherapeutic psychiatry now operates.

The first and most important new economic factor has been the widespread introduction of a fiscal third party bearing considerable responsibility for the fee heretofore paid entirely by the patient to the psychiatrist (1). A second, rapidly expanding economic factor is a process that has been called the "industrialization" of psychiatry (2), which is itself the consequence of efforts to curtail the costs of medical care, including psychiatric care. These new forces have subjected psychotherapeutic psychiatry to a grave test of its ability to maintain both viability and integrity.

The record of medical insurance companies in providing third-party payment for psychotherapeutic services can be described as spotty at best. A cautionary

example of how reliance on such coverage affected one psychiatric community is afforded by the history of the Federal Employees Health Benefits Program (FEHBP) from 1967 to the present. During its years of full operation, federal employees who chose coverage by Blue Cross and Blue Shield—the largest writer of policies—had the benefit of reimbursement of 80% of a designated fee for each psychotherapy visit within a total lifetime expenditure of \$50,000. Under these provisions, psychotherapy of lesser or greater intensity, up to and including psychoanalysis, could be prescribed in accordance with the needs of the patient, with relative freedom from financial constraints. Psychotherapeutic practice flourished. In the late 1970s, the number of psychiatrists per capita in the Washington metropolitan area was second only to that of New York. Psychiatrists who contemplated a career emphasizing psychotherapy or psychoanalysis could be reassured about their economic future; although they were not likely to get rich, they could expect the security of making a satisfactory living by treating patients whose insurance benefits enabled them to afford these services. But storm clouds gathered. After beating off attempts at limitation for some time, Washington psychiatrists were faced with a drastic cutback of outpatient psychiatric benefits, notably for psychotherapy. Since 1984, the Blue Cross and Blue Shield high-option plan, which has the best coverage, has limited mental health benefits to 70% of fees for a maximum of 50 outpatient visits per year.

The effects on practice have been dramatic. Unless they are personally wealthy, patients obviously have found it more difficult to pay fees out of their own pockets for three to five sessions per week than for sessions only once or twice a week. In effect, there has been a return to preinsurance days, when only the affluent could afford intensive psychotherapy or psychoanalysis. However, even here there is a difference, since middle-class patients, now accustomed to paying medical—including psychiatric—bills with insurance help, are unwilling to adjust to almost full out-ofpocket payment. A survey (3) showed that after the cutback, psychiatrists' hours for psychoanalytic practice decreased by 22%, while the number of patients in psychoanalysis whose treatment was paid for by insurance decreased by 31%, and there was a 38% fall in the number of hours of psychoanalytic practice supported by insurance. In the practices of members of the Washington Psychiatric Society, there was a 7% decrease in the number of patients, there were more open hours than before, and the average fee for psychotherapy was lower. In addition to the negative effect on practice, the curtailment of benefits, with its adverse effects on the economic outlook for psychotherapeutic practice, could be expected to be a deterring factor in the career choices of young psychiatrists. Also, the ambience in which psychotherapy is practiced has become clouded by these uncertain economic prospects and by the amount of time and attention required to deal with them.

Why did the medical insurance companies decrease their coverage for psychotherapy? Spokesmen for these companies deny that the cutback is primarily their responsibility. They maintain that they are trying only to sell contracts to corporations and unions whose memberships clearly seem to prefer "dental" over "mental" benefits. Although there is some truth to this contention, it also appears that most health insurance companies offer coverage of psychotherapy reluctantly and unenthusiastically. However, it has been demonstrated that outpatient psychotherapy takes up only a small percentage of the insurance dollar. Furthermore, there is evidence that a large segment of these psychotherapy costs is compensated for by what has been called the offset effect (4)—a considerable diminution in the utilization, and thus in the cost, of other medical services by the judicious and appropriate use of psychotherapy.

I believe that more covert but very important influences are at work behind the apparently decisive dollars-and-cents judgments advanced by the health insurance industry. These influences constitute what may be called the medical model problem: the extent to which the psychotherapeutic encounter can be considered a medical relationship between a physician and a sick person and thus to fall within the purview of insurance companies that provide protection against medical illness. In its various ramifications, partly including and overlapping the related question of the professional background required to do psychotherapy, the questionable "medicality" of psychotherapy confronts insurance company executives with considerable difficulty in securing the kind of information that they need to assay the risks and project the costs of such benefits—thus their unenthusiastic attitude about covering psychotherapeutic services.

The medical or illness model is an abstract concept, but like a pebble thrown into a pond, it has a ripple effect with far-reaching consequences for the economics of psychotherapeutic practice by psychiatrists. Third-party reimbursement depends on a finding of medical necessity: evidence that the patient is suffering from a diagnosed disorder and that the treatment is appropriate. Under a broad definition of the medical model (5), many—probably most—patients seen in psychotherapy can be given appropriate DSM-III diagnoses. Some patients, however, although they manifest subjective distress and maladaptive behavior justifying psychotherapeutic intervention, do not fall within the purview of an illness model unless, by being equated with the existence of any degree of psychopathology, this model is so extended as to encompass the entire human condition. Yet for patients to be reimbursed, diagnoses must be found for all cases. For this reason (as well as for the very important need to maintain confidentiality), the diagnostic information transmitted to insurance companies is often bland and uninformative or, to put it bluntly, inaccurate. The psychiatrist must also decide whether to share this diagnostic information with the patient and must deal with the consequences of this decision in the therapeutic relationship.

These problems are exemplified particularly in connection with the treatment of the personality disorders (DSM-III axis II disorders). In my own experience (6) and that of others (7), such patients form the bulk of psychoanalytic practices at least, but, as has been recently pointed out, "insurance coverage problems make a third party a most reluctant partner" in their treatment (8). This reluctance is based on a number of factors, including what may be called epidemiological considerations: the difficulty in defining these disorders in terms of expected prevalence and the presence of definable onset and end of the illness; moral hazard (the encouragement of the use of a service or treatment because it is insured rather than because an illness exists); lack of consumer demand; difficulties in accountability; and problems with provider credentials.

Nevertheless, whatever the merit of these objections, psychotherapy, often intensive, is the only treatment offering considerable hope of remediation for many of the personality disorders. Will such treatment become, in Alan Stone's words (9), "luxury goods" in the

third-party era?

Its effect in bringing to the surface hitherto masked medical model problems is not the only way in which third-party involvement has an impact on psychotherapeutic practice. Will the treatment relationship be seriously compromised when responsibility for payment is shared by someone other than the patient? Many conflicting opinions can be heard on this issue, but a recent data-based study (10, 11) came to the conclusion that although the payment of a fee by the recipient of psychotherapy is beneficial, it is not essential. Rather than being encased in a rigid theoretical straitjacket, most practitioners have evolved a flexible attitude toward questions of fee setting, and this has not lessened therapeutic efficacy.

Still another consequence of third-party payment has been its influence on the relationships between psychiatrists and their professional colleagues. With regard to the attitudes of many psychoanalytically inclined psychiatrists toward other physicians, there has been a distinct change from the casual indifference of the era before third-party involvement to much closer collaboration as part of the heralded remedicalization of psychiatry. In addition to the upsurge of interest in biological causes and treatments of psychiatric disorders, this rapprochement also can be seen to have economic roots. It is in the interest of psychotherapeutic physician's for the disorders they treat to be dealt with in a nondiscriminatory fashion, just as other medical illnesses are.

Relationships with other mental health professionals, particularly clinical psychologists, however, have become more ambiguous. Certainly collaborative aspects exist, since both psychotherapeutic physicians and psychologists have an interest in combatting prejudices against inclusion of their services in health insurance contracts, but, in a market sense, the two

professions are in competition with each other. Psychiatrists are trying to preserve an entrenched position with regard to third-party coverage, whereas psychologists want their services to be reimbursable just as those of physicians are. There is no doubt that psychologists have made great headway in their endeavor. They are now licensed in 50 states and the District of Columbia. So-called freedom of choice laws mandating nondiscriminatory coverage for their services have been passed in an increasing number of states. But will the psychologists' victory have Pyrrhic aspects? Insurance companies have reacted to this competitive situation with an increase in the ambivalence with which they face the whole question of coverage for psychotherapeutic services. There may be a tendency for them to take the attitude of a "plague on both your houses" by cutting benefits for psychotherapy, or at least by making no great effort to sell these services to corporations and unions. Ironically, the prize in contention between psychiatrists and psychologists—third-party coverage for psychotherapeutic services—may be diminishing in value as the tide turns away from such benefits.

I turn now to the second of the overlapping forces that influence the economic climate in which psychiatrists practice psychotherapy. In order to reduce the runaway inflation affecting the cost of health care in this country (a rise from 5.3% of the gross national product in 1960 to 10.7% in 1985) (12), economies are being imposed on all aspects of the health care industry. Cost-benefit considerations have become paramount and have resulted in a burgeoning of market-based strategies like health maintenance organizations (HMOs), independent practice associations (IPAs), and preferred provider organizations (PPOs) and of regulatory devices like diagnosis-related groups (DRGs). For-profit corporations are taking over an increasing segment of hospital care. While they are being highly touted in some quarters as offering fiscal salvation, there are critics who see in this "social transformation of American medicine" (13) the danger that American physicians may lose their souls, not to the government store but to big business. Although they are still only premonitory for the cottage craft represented by individual practitioners of psychotherapy, we hear warnings (2) that psychiatry is being transformed into an industry where prospective payment, automation, salaried employment, and central control of clinical activity may become the dominant forms of medical practice. These conditions may force both patients and providers toward various alternative provider organizations to shield themselves from economic uncertainties. An atmosphere in which "cost consciousness may supplant compassion" (2) offers little hope for the chronically mentally ill and for others requiring extended treatment. Although not yet affected, patients requiring intensive psychotherapy would fall into the endangered category, especially in view of the difficulty in producing "credible evidence of psychotherapy being both clinically and cost effective" (14). As if documenting this prediction, a recent study found an increase in the percentage of practitioners who work part time in a variety of organized care settings rather than independently (15).

The various schemes that have been promulgated to reduce health care costs by introducing competition and, often, prospective payment for services, while at the same time defending high quality care for patients, already pose a challenge to the economic viability of intensive forms of psychotherapy (16). An example of the trend-setting influence of HMO practices is afforded by a recent proposal in Virginia to cut the psychiatric benefits for Virginia state employees in private insurance plans to the lower level supplied by HMOs.

The introduction of DRGs to control hospitalization costs by introducing prospective payment based on predetermined diagnostic categories has been called "the greatest alteration in the economics of American health care since the introduction of Medicare and Medicaid in 1965" (17). It is clear that the overall effect of DRGs is to cut costs by imposing a kind of rationing of care based on economic rather than quality considerations. While this has not yet had an effect on outpatient psychiatric care, it may be only a question of time until even psychotherapists will have to reckon with DRG requirements in order to receive insurance payment and to avoid being divorced even more from mainstream medicine. To construct a diagnostic package for the psychoanalytic treatment of, say, a patient with a compulsive personality disorder certainly would be a formidable task.

If these cost control mechanisms already pose problems for medical psychotherapists, future possibilities are even more troubling. Of course, it is in the nature of crystal balls to be cloudy, and conditions may turn around, especially if, as may be the case with for-profit hospital corporations, supposed cost-saving benefits prove to be illusory. But, to envision a worst-case scenario, it is not impossible that the health care industry and the various cost-control mechanisms, with their acronyms and all their regulations, could gradually take over the bulk of medical care in this country. Would not individual, entrepreneurial, essentially unregulated practice based on fees for service with or without third-party assistance then become exceptional and finally anachronistic? What will be the fate of such a labor-intensive activity as psychotherapy when, in a capital-intensive era, we may all be working for corporations or be banded together in heavily regulated and cost-conscious groups? At the least, the pressure for cost effectiveness would discourage intensive long-term methods and would encourage shorter, time-limited psychotherapy or behavioral methods. There is a serious question whether the removal of the economic conditions underlying practice as Freud knew it would allow psychoanalysis and intensive psychotherapy to continue in anything like their present form.

Faced with the challenges posed by third-party pay-

ment and the rise of corporate and regulated medicine, what responses or adaptations do psychiatrists have available? We may rule out as most unlikely in this country a replacement of our present multifaceted system of health care by some form of national health insurance with generous psychotherapeutic benefits, such as exists in Canada. (In any event, Canadian psychiatrists are now complaining that their fees are being increasingly regulated by the government.) I see three possible positions. The first is to attempt to broaden substantially insurance benefits for medical psychotherapy. This involves convincing the insurance carriers and their clients, the corporations and unions, of the necessity, effectiveness, and cost feasibility of these services. The goal here is nondiscriminatory coverage. It requires marketing strategies and efforts to generate and influence relevant legislation. This position, currently maintained by organized psychiatry and psychoanalysis, would be unlikely to alter the present uneasy and ambivalent relationship with psychologists because of its necessary implication that the psychotherapeutic product dispensed by physicians is different and better than that offered by these other

A second position is to abandon attempts to include within the limits of the medical model all the conditions treated and methods employed by medical psychotherapists and to supplement this model with a broader disability model defined in terms of suffering and interpersonal dysfunction without regard to whether these elements constitute illness. A by-product would be termination of the adversarial relationship with psychologists. The two professions would then band together in promoting society's recognition and approval of their efforts to broaden third-party coverage to include these admittedly nonmedical forms of personal distress. As a corollary, the last barriers to admission of psychologists to psychoanalytic training and full participation in psychoanalytic societies would be dropped.

The third position is to accept a drastic limitation in third-party coverage for psychotherapy. This position amounts to a return to the era before medical insurance, when such treatment was available only to an affluent segment of the population except to the extent that practitioners of psychoanalysis and intensive psychotherapy, out of altruism and interest in their method, would accept lower incomes. Such a retrenchment would have the advantage of disposing of the ambiguities and incongruities attendant upon the need to conform to third-party standards, but it would be at the cost of excluding many persons from necessary treatment. It would also, I believe, discourage medical students from entering psychotherapeutic practice and would have the indirect effect of lessening the humanistic and leavening effect of the psychotherapeutic point of view on medical education and practice.

I believe strongly that psychotherapy, if viewed in realistic perspective (6), is an indispensable tool in the therapeutic armamentarium of physicians. I also believe that skill in exercising it is a defining characteristic of the well-rounded psychiatrist. But, to preserve the viability of medical psychotherapy as a treatment generally available rather than one reserved for the affluent, the economic storm clouds I have described must be heeded. This is a task requiring not only firm conviction in the rightness of the goal but a willingness to be flexible in its accomplishment.

If one accepts, as I do, that individual psychotherapy—at least of the insight-oriented variety that may require a substantial amount of time to accomplish—is not likely to flourish in a corporate atmosphere, it becomes necessary to preserve the ability of psychotherapeutic psychiatrists to function as independent fee-for-service practitioners. To do this without thirdparty insurance assistance would mandate a restricted socioeconomic range of patients. Even though the goal of nondiscriminatory coverage may be difficult to attain, reasonable third-party benefits for psychotherapy can substantially broaden the spectrum of patients who may be treated without economic hardship.

It has been a theme of this paper that questions about medicality constitute a major, underlying impediment to insurance company coverage for patients treated with psychotherapy. Therefore, these issues need to be addressed in order to provide a firmer basis for third-party financial support and also a useful distinction between medical psychotherapy and psychotherapy dispensed by nonmedical practitioners. The question to be determined is whether an operational distinction can be made between psychopathology, universal among imperfect humankind, and illness. Although this is probably not possible in an absolute sense, approximations of this distinction can be made. For instance, a patient suffering from a bipolar affective disorder certainly is ill, while an otherwise well-functioning individual with interpersonal problems in the marital or career sphere may be found upon investigation not to satisfy illness criteria, even in the broader use of this term. A consequence of such judgments, of course, would be that a minority of patients in some practices could not properly be designated as suffering from a diagnosable disorder, and their cases would fall under the V codes of DSM-III. thus casting into doubt their insurance coverage. The advantages, however, of even a modest use of V code designations would be to strengthen the legitimacy of claims for coverage for the large majority of patients treated by psychotherapeutic psychiatrists. Making this distinction also would protect the ability of psychiatrists to continue to use psychotherapy as well as medication in the treatment of those severely disturbed chronic patients who need care for indefinite periods at flexible intervals. Patients requiring long-term intensive psychotherapeutic care would have to be scrutinized for conformance with illness criteria. I believe that many of them would qualify. In questionable cases, especially those in which the goal of treatment is not always clear, third-party cooperation might be obtained by restricting coverage to some combination of duration of treatment and number of sessions.

In spite of the problems they pose, efforts to establish reasonable criteria for medicality would, it seems to me, be a worthwhile endeavor for preserving the rightful place of psychotherapy within the armamentarium of treatments offered by psychiatrists.

REFERENCES

- 1. Chodoff P: Psychiatry and the fiscal third party. Am J Psychiatry 1978; 135:1141–1147
- 2. Bittker TE: The industrialization of American psychiatry. Am J Psychiatry 1985; 142:149-154
- 3. Sharfstein SS, Eist H, Sack L, et al: The impact of third-party payment cutbacks on the private practice of psychiatry: three surveys. Hosp Community Psychiatry 1984; 35:478-481
- 4. Schlesinger HJ, Mumford E, Glass GV, et al: Mental health treatment and medical care utilization in a fee-for-service system: outpatient mental health treatment following the onset of a chronic disease. Am J Public Health 1983; 73:422-429
- 5. Parson T: The Social System. New York, Free Press, 1951
- 6. Chodoff P: Assessment of psychotherapy: reflections of a practitioner. Arch Gen Psychiatry 1982; 39:1097-1103
- 7. Gedo JE: A psychoanalyst reports at mid-career. Am J Psychiatry 1979; 136:646-649
- 8. Sharfstein S, Gutheil T, Stoddard F: Money and character disorders: on how to get the recalcitrant third party and the impossible patient to pay your bills, in Character Pathology: Theory and Treatment. Edited by Zales M. New York, Brunner/ Mazel, 1983
- Stone AA: Book review, OF Kernberg: Severe Personality Disorders: Psychotherapeutic Strategies. Am J Psychiatry 1986; 143:243-244
- 10. el Guebaly N, Prosen H, Bebchuk W: On direct patient participation in the cost of their psychiatric care, part 1: a review of the empirical and experimental evidence. Can J Psychiatry 1985; 30:178-183
- 11. el Guebaly N, Prosen H, Bebchuk W: On direct patient participation in the cost of their psychiatric care, part II: access to services, impact on practice and training implications. Can I Psychiatry 1985; 30:184-189
- 12. Culliton BJ: Medicine as business: are doctors entrepreneurs? Science 1986; 233:1032-1033
- 13. Starr P: The Social Transformation of American Medicine. New York, Basic Books, 1982
- 14. Eisen P: Efficacy and changing trends in the psychotherapy
- "industry." Aust NZ J Psychiatry 1983; 17:9-16

 15. Fenton WS, Leaf PJ, Moran NL, et al: Trends in psychiatric practice, 1965-1980. Am J Psychiatry 1984; 141:346-351
- 16. Sharfstein S, Beigel A: Less is more? Today's economics and its challenge to psychiatry. Am J Psychiatry 1984; 141:1403-1408
- 17. Dolenc DA, Dougherty CJ: DRGs: the counterrevolution in financing health care. Hastings Cent Rep 1985; 15:19-29

Mental Illness Awareness Week

The week of October 4-10, 1987, should be marked in red on the calendar of every APA member. These 7 days were established by the Congress and President Reagan as Mental Illness Awareness Week.

The APA, through its Division of Government Relations, worked with Congress to create this special week, now in its fourth year. We did this not merely to publicize psychiatry but for the sake of our patients, in keeping with the sixth objective of the APA as stated in the Constitution: "To promote the best interests of patients and

those actually or potentially making use of mental health services."

As every psychiatrist knows, mental illnesses constitute one of society's most serious public health problems. According to the Alcohol, Drug Abuse, and Mental Health Administration (1), the prevalence of mental and addictive disorders for all age groups is 15% to 22.5%, and the overall economic impact of these disorders is \$185 billion. Every day in our offices, hospitals, and clinics we see the tragedies of destroyed lives, broken and bankrupt families, and overburdened public agencies and clinics. We understand the pain that is hidden from the rest of the world except when it occasionally spills out into our streets and parks.

The greatest tragedy of all is that society does not acknowledge the prevalence or severity of these illnesses and even misreads their signs. "There's nothing wrong with him that a good swift kick in the pants wouldn't fix," quotes an ad slogan in a campaign sponsored by the American Mental Health Fund and the Advertising

Council in an effort to force the public to "see the sickness."

While research spending is more generous than in the past thanks to increased efforts by the APA and other organizations, it is woefully low compared to other areas of research. The new National Alliance for Research on Schizophrenia and Depression (NARSAD) reports that we spend \$203 on research for every cancer patient and \$88 for each heart patient but only \$7.35 for each American with schizophrenia. That is about the same amount spent to study tooth decay, according to NARSAD (2). Insurance coverage is equally lacking. Despite the fact that 25% of all beds in our hospitals are filled by mentally ill patients—more beds than for the victims of heart disease, cancer, and respiratory ailments combined—insurance to pay for mental care goes about half as far as insurance to pay for physical illnesses.

In 1983 APA surveyed health insurance benefits provided by 300 major privatesector employers covering 33 million workers and dependents (3). All plans provided some level of inpatient coverage for mental illness, but only 49% of those insured were protected for the cost of mental illness on the same basis as for any other illness. While 98% of the plans had some coverage for outpatient expenses, only 10% provided benefits on the same basis as for outpatient coverage for other

medical conditions.

Why do mental illnesses and those who suffer from them fare so poorly in our society? It should be no surprise to psychiatrists that the cause, in large measure, is stigma. Still imbedded in our national fabric are the myths of mental illness: the mistaken notion that, except for a very few severely and psychotically ill persons who do not respond well to treatment, mental illnesses are not really a public health problem. There is a perception that persons with mental disorders who seek care are somehow less deserving than their neighbors who seek care for physical problems, as if those with a mental disorder brought it on themselves. There are also the

destructive myths that mentally ill people are, by definition, violent and unpredictable and that there is no hope for recovery.

Yes, stigma is alive and well. Ending its hold on social policy and especially its discriminatory effect on health insurance is going to take time—years, in fact—and will require the best combined efforts of all of us in all fields and professions that care for persons with mental illnesses. One week a year devoted to mental illness awareness will not do it. One organization cannot do it.

The good news is that over the past couple of years, we have made a start toward reduction of that stigma. I have already mentioned the American Mental Health Fund advertising campaign designed to raise national awareness of mental illnesses in order to stimulate a public demand for more money to be spent on research. This campaign will begin its second major phase next spring. NARSAD, while concerned about public awareness, is putting its initial emphasis on supporting the efforts of young investigators to ensure a steady flow of new, creative, and energetic research talent into the field.

Many other groups are also active in the fight against stigma. Over the past 5 years the National Alliance for the Mentally Ill (NAMI) has grown into a major advocate on behalf of the mentally ill. NAMI will not sit back passively and allow its ill family members to be ridiculed, mistreated, or, worst of all, forgotten. The more recently created National Depressive and Manic-Depressive Association and the Obsessive-Compulsive Disorder Foundation, Inc., are emerging as major organizations of patients.

These organizations join the National Mental Health Association, which had been battling stigma alone for many years. It is encouraging that all of these groups are forming working relationships to support common objectives, one of which is public education about mental illness. Thus, Mental Illness Awareness Week 1987 is a great opportunity. Strong organizations are now working together. We have an expanding body of exciting research advances in the neurosciences which is beginning to point to the causes of severe mental illnesses, as well as to improved treatment.

Mental Illness Awareness Week is the result of hard work by many APA members, components, and staff offices. The APA Division of Government Relations has worked diligently during each of the past 4 years to convince Congress of the need to legislate the creation of the special week. Many members worked on that effort at the local level through the Legislative Affairs Network. At the same time, the Division of Public Affairs worked hard to develop a nationwide public education effort and to launch it through the Public Affairs Network and outside organizations. Each year the campaign has grown, spreading wider the network of participants and, through them, increasing the number of people reached with a positive message about mental illnesses and psychiatric treatment.

This year, people throughout the country will hear and see public service radio and television announcements about mental illness, will read letters to the editor and Op-Ed and feature articles, will attend public lectures sponsored by our District Branches and other groups, and will hear brief news reports on mental illnesses and their treatment on over 1,000 radio stations. On October 9 in Washington, D.C., the APA Division of Government Relations, in cooperation with the APA Office of Research, will convene an afternoon seminar for senators, congressmen, and their staffs in a hearing room on Capitol Hill at which leading scientists will describe their latest research.

The effects of stigma go beyond the general public to our medical colleagues. That is why we urge our members and our District Branches to use Mental Illness Awareness Week to educate other physicians about the reality of mental illnesses and the importance of psychiatric care as part of overall health care. Health professionals influence the thinking of millions of people—their patients—each year. Therefore, combating the stigma and prejudice against mental illness and psychiatric treatment that exist within the rest of medicine and other healing professions is a major challenge for us.

When it comes to fighting stigma, we cannot afford to say, "Let someone else do it." Psychiatrists must take the lead in this effort, for we are in a unique position to do so. Generally, our patients cannot or will not be advocates for themselves. We know the illnesses they suffer and we know the pain. We know how to evaluate and

treat those illnesses and we know that treatments work. We have a responsibility to speak out to our friends, our medical colleagues, our local community decision makers, and our legislators at all levels.

Mental Illness Awareness Week is an excellent time to start: to speak with pride about what we do and how our professional skills help people with mental disorders. But the task does not end on October 10. Mental Illness Awareness Week should serve as a reminder to all of us that raising awareness about mental illnesses and their treatment, and thus negating myths and stereotypes, is the year-round responsibility of each one of us. That is the vital message of Mental Illness Awareness Week.

REFERENCES

- 1. Research on Mental Illness and Addictive Disorders: Progress and Prospects. A Report of the Board on Mental Health and Behavioral Medicine, Institute of Medicine, National Academy of Sciences. Am J Psychiatry (suppl) 1985; 142(7):1–41

 2. National Alliance for Research on Schizophrenia and Depression: Allied for Answers: Mental Illness
- Research Campaign. Chicago, NARSAD, 1987

 3. Muszynski S, Brady J, Sharfstein SS: Coverage for Mental and Nervous Disorders: Summaries of 300 Private Sector Health Insurance Plans. Washington, DC, American Psychiatric Press, 1983

PAUL J. FINK, M.D.

Dr. Fink is President-Elect of APA; Medical Director, Philadelphia Psychiatric Center; Chairman, Department of Psychiatry, Albert Einstein Medical Center, Philadelphia; and Professor and Deputy Chairman, Department of Psychiatry, Temple University, Philadelphia. Address reprint requests to Dr. Fink, Philadelphia Psychiatric Center, Ford Road and Monument Avenue, Philadelphia, PA 19131.

Morning Versus Midday Phototherapy of Seasonal Affective Disorder

Frederick M. Jacobsen, M.D., M.P.H., Thomas A. Wehr, M.D., Robert A. Skwerer, M.D., David A. Sack, M.D., and Norman E. Rosenthal, M.D.

Sixteen depressed patients with seasonal affective disorder participated in a double-blind crossover study comparing the antidepressant effects of 2 hours of early morning and 2 hours of early afternoon therapy with bright light. They responded equally well to both treatments. These results suggest that the antidepressant effects of phototherapy in seasonal affective disorder do not depend on its capacity to extend day length (photoperiod) and are not likely to be due to a shift in the timing of circadian rhythms. These findings have practical implications for the administration of phototherapy in the treatment of seasonal affective disorder.

(Am J Psychiatry 1987; 144:1301-1305)

S easonal affective disorder is a cyclic mood disturbance characterized by fall-winter depression and spring-summer hypomania or euthymia. The syndrome occurs predominantly in women, and depressive symptoms often include hypersomnia, anergia, fatigue, carbohydrate craving, and weight gain (1). In many animals, seasonal changes in behavior and physiology are triggered by changes in the duration of daily sunlight, or photoperiod (2). We (1, 3–8) and others (9–16) have shown that the winter depressions of

seasonal affective disorder, like the seasonal behavioral changes of lower animals, can be reversed by treatment with bright artificial light. The importance of the timing of phototherapy in the treatment of seasonal affective disorder, however, is controversial. Some researchers (9, 10) have found phototherapy to be most effective when administered in the early morning, whereas we (5, 7) and others (16) have also reported success with light administered in the evening. The time of day at which phototherapy is administered has practical as well as theoretical implications, since convenience of use may influence a patient's compliance with a prescribed treatment.

The mechanism of the antidepressant effects of phototherapy is unknown. The initial use of bright light in the treatment of seasonal affective disorder presumed that changes in day length were responsible for both the disorder and its response to phototherapy (1, 4). However, we recently reported that the antidepressant effects of phototherapy in patients with seasonal affective disorder may not work by a photoperiodic mechanism (7). Lewy et al. (9) have hypothesized that the winter depressive symptoms of seasonal affective disorder are due to a disturbance of circadian rhythms. According to their theory, circadian rhythms in patients with this disorder become phase-delayed in the fall and winter so that physiological events which usually occur late at night are shifted into the early morning hours. The hypersomnia that many patients with seasonal affective disorder experience, for example, is said to result from the shift in the rhythm for sleep to later in the morning hours in the winter. According to this model, the rationale for using phototherapy in the treatment of seasonal affective disorder is based on the demonstration in animals (17) and in humans (18) that light pulses are capable of shifting the timing of circadian rhythms.

In animals, light administered late in the subjective

Received Oct. 22, 1986; accepted March 17, 1987. From the Clinical Psychobiology Branch, NIMH. Address reprint requests to Dr. Jacobsen, Clinical Psychobiology Branch, National Institute of Mental Health, Bldg. 10, Rm. 4-South 239, 9000 Rockville Pike, Bethesda, MD 20892.

The authors thank Adriana Dreizzen, M.D., Judith Klein, M.S.W., and Susan Rogers, R.N., for performing the ratings and Shelly Jones, Connie Carpenter, Paul Gaist, and Todd Hardin for technical assistance.

The Vitalites and fixtures used for treatment were provided by the Durotest Co., North Bergen, N.J.

day delays the phase of circadian rhythms, while light presented early in the subjective day advances the phase of circadian rhythms. The relationship between the timing of light exposure and the resulting shift in circadian rhythms is called the phase-response curve (19). Light given in the middle of the subjective day falls in a section of the phase-response curve called the dead zone, in which the circadian pacemaker is not affected by phase-shifting stimuli (19). On the basis of the phase-shift hypothesis of seasonal affective disorder, the antidepressant effects of light should occur only when phototherapy is administered in such a way as to reset the abnormally timed circadian rhythms (9). We hypothesized that if humans have a circadian phase-response curve analogous to that of lower animals and seasonal affective disorder is due to a phasedelay of circadian rhythms, then a pulse of light given at midday should fall in the inactive portion of the phase-response curve and would consequently not be expected to produce a phase shift or antidepressant effects. With regard to our original photoperiodic model, we hypothesized that if phototherapy works by extending the apparent duration of short winter days, then a pulse of light given early in the morning should be active and a pulse given at midday should be inactive. The experiment that we report here can be considered as a test of both phase-shift and photoperiodic models, as we contrasted the antidepressant effects of phototherapy given in the early morning with those of phototherapy given at midday.

METHOD

Patients with seasonal affective disorder were referred by psychiatrists familiar with our program or were recruited through the media. Criteria for entry into the study were 1) a diagnosis of major depressive disorder by the Research Diagnostic Criteria (20), 2) a diagnosis of seasonal affective disorder by the criteria of Rosenthal et al. (1), 3) a Hamilton Rating Scale for Depression (21) score of 15 or more, 4) normal results on a physical examination and laboratory tests, and 5) a willingness and ability to undergo the rigorously controlled experimental conditions.

Depressed patients meeting criteria for seasonal affective disorder and having two consecutive Hamilton scale scores greater than 14, according to blind consensus raters, entered a random-order crossover study. Treatments consisted of 2 hours of phototherapy per day for 7 days. Phototherapy was administered between 6:30 a.m. and 9:00 a.m. in the morning condition and between noon and 2:00 p.m. in the midday condition. To keep sleep times constant during the study, patients were instructed to maintain a 6:30 a.m. wake-up time throughout the study. To balance environmental light exposure, patients were also instructed to remain indoors in regular dim illumination during the 6:30 a.m to 9:00 a.m. and noon to 2:00 p.m. intervals at all nontreatment times during the study.

Patients were further requested to keep outdoor environmental light exposure times (e.g., travel to work) as constant as possible throughout the course of the study. To facilitate and measure compliance with these strictly controlled lighting conditions, patients were asked to complete "light logs" (4) documenting their total light exposure (treatment and ambient) every half-hour during the 6:30 a.m. to 9:00 a.m. and noon to 2:00 p.m. intervals during the weeks of treatment. Treatment conditions were separated by at least 1 week; a relapse Hamilton depression scale score of 10 or more was required before patients entered the second treatment condition. Light for the treatments consisted of 2500 lux of full-spectrum light (Vitalite) emitted from a rectangular metal fixture containing eight fluorescent tubes behind a plastic neutral-density diffusing screen. Patients were instructed to sit 3 ft. away from the eye level light and to glance at the light approximately once a minute. They were instructed not to sleep during the treatments but were free to engage in activities while sitting. All patients gave informed consent before participating in the study.

Each patient's clinical state was evaluated by raters blind to treatment conditions, using the Hamilton scale scores, before and after each treatment and after withdrawal of treatment (7 days after the last day of treatment). Patients were also rated with the SAD (seasonal affective disorder) Supplementary Items (22), an addendum that we have found to be particularly useful in measuring the "atypical" depressive symptoms of seasonal affective disorder. Mean Hamilton and SAD Supplementary Items scores for the two treatments were analyzed by means of analysis of variance and paired t tests.

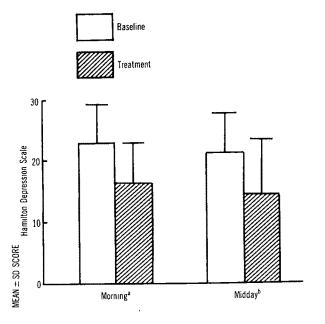
To assess any possible influences of patients' expectations on the outcomes of the treatments, we asked patients to rate their expectations on a 9-point scale on which 0 indicated an expectation of no change, +4 indicated an expectation of very much improvement, and -4 indicated an expectation of very much worsening. After completing the questionnaire, patients were asked to try to disregard their expectations and simply report how they felt at subsequent rating times in the study. Patients and staff were asked not to discuss the treatments with one another.

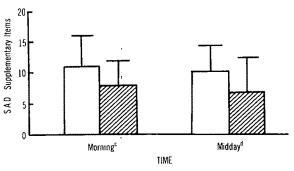
RESULTS

Twenty patients, three men and 17 women, entered the study. Three patients dropped out before completing the first condition because of scheduling difficulties. One patient was removed from the study after the unexpected death of her father. Of the 16 patients who completed the study, seven began with the morning condition and nine with the midday condition.

Mean±SD pre- and posttreatment Hamilton scale and SAD Supplementary Items scores are shown in figure 1. Both treatments resulted in significant

FIGURE 1. Antidepressant Effects of 2 Hours of Morning and Midday Phototherapy on the Hamilton Scale and SAD Supplementary Items Scores of 16 Depressed Patients With Seasonal Affective Disorder





^aSignificant difference between baseline and treatment (t=2.77, df=30, p<.05).

bSignificant difference between baseline and treatment (t=2.91, df=30, p<.01).

^cSignificant difference between baseline and treatment (t=2.26, df=30, p<.05).

dDifference between baseline and treatment (t=1.87, df=30,

changes in depression scores (Hamilton scale, F=13.53, df=1, 14, p=.003; SAD Supplementary Items, F=7.31, df=1, 14, p=.017). Morning light led to a decrease in Hamilton depression score from 22.4 to 16.3, and midday light was associated with a drop in the Hamilton score from 21.6 to 13.9. Treatment with morning light led to a decrease in the SAD Supplementary Items score from 11.3 to 7.6, and treatment with midday light led to a decrease in that score from 10.1 to 6.9. There were no significant differences in the changes in Hamilton and SAD Supplementary Items scores between morning and midday phototherapy, and no ordering effects were seen.

If one regards a decrease of 4 or more points in the

Hamilton depression scale score as indicating significant improvement (1), 14 of the 16 patients (87.5%) improved in at least one of the treatment conditions. By this criterion, seven of 16 patients (43.8%) improved in both the morning and the midday conditions, four (25.0%) improved only in the midday condition, three (18.9%) improved only in the morning condition, and two (12.5%) showed nonsignificant improvement or worsened in both conditions. Comparison of the reduction in Hamilton scale scores associated with morning and midday phototherapy reveals that six patients had an improvement 4 or more points greater in the midday than in the morning condition, five patients had an improvement 4 or more points greater in the morning condition than in the midday condition, and five patients had less than a 4-point difference between their morning and midday scores. A failure to respond to the first treatment condition was not associated with treatment response to the second condition.

Patients' expectations regarding the two treatment conditions are presented in table 1. The responses of 15 of the 16 patients were obtained for both conditions. Inspection of the data reveals that all of the patients had at least minimal expectations of improvement in both conditions. Five of the 15 patients had higher expectations of improvement in the morning condition, four patients felt that they would do better in the midday condition, and six patients had equal expectations of the two conditions. If a difference of more than 4 points on the Hamilton scale is taken to mean a significant difference in outcome between the two treatments (1), then comparison of patients' ranked predictions of improvement with their actual change in Hamilton scores reveals that only three of 15 patients (20%) correctly predicted which treatment would be more beneficial.

DISCUSSION

The results indicate that 2 hours of phototherapy given at midday is as effective in the treatment of seasonal affective disorder as 2 hours of phototherapy given in the early morning. Since the midday light was administered at a time that coincides with the inactive portion of the circadian rhythm phase-response curve in primates (23), it appears unlikely that the antidepressant effects of phototherapy were due to a phase shift of circadian rhythms. However, since a dead zone in the circadian phase-response curve has not yet been demonstrated in humans, it could be argued that both morning and midday light acted through phase shifts in circadian rhythms. This speculation could be tested by measuring the phase shifts in 24-hour patterns of hormone levels and body temperature caused by morning and midday light in patients with seasonal affective disorder and in normal control subjects. If humans have a circadian phase-response curve analogous to that of other primates, then morning light should

TABLE 1. Seasonal Affective Disorder Patients' Predictions of Response to Morning and Midday Phototherapy and Subsequent Changes in Their Hamilton Depression Score

	First	Prediction of	f Response ^a	Higher Ranked	Response to I (Hamilton ch		Accuracy of
Patient	Condition	Morning	Midday	Condition	Morning	Midday	Prediction
1	Midday	3	3	Neither	2	14	Incorrect
2	Midday	3	3	Neither	1	8	Incorrect
3	Morning	3	2	Morning	6	8	Incorrect
4	Midday	1	4	Midday	2	6	Correct
5	Midday	3	3	Neither	8	-3	Incorrect
6	Morning		******	—;	7	-1	_
7	Midday	3	3	Neither	9	13	Incorrect
8	Midday	3	4	Midday	0	2	Incorrect
9	Morning	3	3	Neither	17	11	Incorrect
10	Morning	2	3	Midday	9	4	Incorrect
11	Midday	3	1	Morning	9	12	Incorrect
12	Morning	3	4	Midday	13	22	Correct
13	Midday	2	2	Neither	-4	-6	Incorrect
14	Midday	4	2	Morning	17	18	Incorrect
15	Morning	2	1	Morning	-3	5	Incorrect
16	Morning	. 4	3	Morning	7	3	Correct

^a9-point scale: 0=expectation of no change; +4=expectation of very much improvement; -4=expectation of very much worsening. ^bA change of more than 4 points on the Hamilton scale was considered significant.

phase-advance these rhythms and midday light should have no effect on the rhythms' circadian phase positions. However, if, as Lewy et al. (9) have hypothesized, the biological clock in patients with seasonal affective disorder is shifted to later than normal, then phase shifts in hormone levels and body temperature might be produced in these patients (but not in normal individuals) by light given at midday.

Circadian variations in therapeutic and toxic effects of medications have been described (24), and it is also possible that there is a circadian sensitivity to the antidepressant effect of light (25). While the results of this study suggest that a specific time of day is not necessary for the antidepressant effects of phototherapy, there is nonetheless evidence that there may be a circadian variation in sensitivity to phototherapy. Two recent studies (11, 12) found that phototherapy may be somewhat less effective when administered during the evening rather than during the early morning. The lack of efficacy of evening light in these studies may have been accounted for by the duration of light exposure used, since the antidepressant response to phototherapy appears to be a dose-response effect (11, 14, 15, 26), and our studies showing a strong antidepressant response to evening light (5, 7) have used relatively long durations of light exposure (4-5 hours) compared with the durations used by other groups.

The equivalent antidepressant effect of morning and midday light is evidence against a photoperiodic mechanism for the antidepressant effects of phototherapy in seasonal affective disorder. In photoperiodic animals, seasonal changes in behavior and physiology are triggered by changes in the duration of the daily photoperiod. We recently tested the photoperiodic hypothesis of phototherapy by contrasting the antidepressant effects of experimentally simulated long (summer) and short (winter) days in seven patients with seasonal

affective disorder (7). Long-day and short-day conditions were found to have equivalent antidepressant effects, thereby casting doubt on a photoperiodic mechanism. Similarly, the robust antidepressant effect of midday light in the current study would not be predicted by a photoperiodic model, since the light was not given at a time of day that would extend the photoperiod.

The results of patients' expectations of improvement during the two treatment conditions failed to reveal a bias in favor of a particular treatment. All of the patients expected at least minimal improvement with each type of phototherapy and were nearly equally divided in their predictions of relative improvement during the two treatment conditions. Patients' expectations were not predictive of their subsequent therapeutic responses to a particular treatment condition. In fact, several patients' depressions worsened during treatments that they had expected would help them. It is interesting to note that patients' expectations of improvement during the second treatment condition were not consistently influenced by their experience with the first treatment condition. While the role of expectations in influencing treatment outcome can be quite powerful (27), the finding that a majority of patients (12 of 15) incorrectly predicted which treatment condition would be more beneficial argues against the idea that the antidepressant response to phototherapy is solely due to patients' expectations or a placebo effect.

The antidepressant activity of midday light has practical implications for the treatment of seasonal affective disorder, since it appears that a specific time of day is not required for phototherapy to be effective. On the basis of the findings of this study, we recommend that the first week of phototherapy be prescribed at a time of day convenient to the patient; therapy can

then be switched to another time of day (usually earlier) if it is not initially effective. The efficacy of midday light makes way for the use of phototherapy in the workplace as well as at home—in fact, at least half of the patients in this study used the lights at work during the midday condition. Besides increasing the convenience of phototherapy in the treatment of seasonal affective disorder, the antidepressant effect of midday light suggests that further research is needed to understand the mechanism of action of light in the etiology and treatment of seasonal affective disorder.

REFERENCES

- Rosenthal NE, Sack DA, Gillin JC, et al: Seasonal affective disorder: a description of the syndrome and preliminary findings with light therapy. Arch Gen Psychiatry 1984; 41:72–80
- Hoffman K: Photoperiodism in vertebrates, in Handbook of Behavioral Neurobiology, vol 4. Edited by Aschoff J. New York, Plenum, 1981
- 3. Lewy AJ, Kern HA, Rosenthal NE, et al: Bright artificial light treatment of a manic-depressive patient with a seasonal mood cycle. Am J Psychiatry 1982; 139:1496-1498
- Rosenthal NE, Sack DA, Carpenter CJ, et al: Antidepressant effects of light in seasonal affective disorder. Am J Psychiatry 1985; 142:163–170
- James SP, Parry BL, Carpenter CJ, et al: Evening light treatment of seasonal affective disorder. Br J Psychiatry 1985; 147:424– 428
- Rosenthal NE, Carpenter CJ, James SP, et al: Seasonal affective disorder in children and adolescents. Am J Psychiatry 1986; 143:356-358
- Wehr TA, Jacobsen FM, Sack DA, et al: Timing of phototherapy and its effect on melatonin secretion do not appear to be critical for its antidepressant effect in seasonal affective disorder. Arch Gen Psychiatry 1986; 43:870–875
- Hellekson CJ, Kline JA, Rosenthal NE: Phototherapy of seasonal affective disorder in Alaska. Am J Psychiatry 1986; 143: 1035–1037
- Lewy AJ, Sack RL, Fredrickson RH, et al: The use of bright light in treatment of chronobiologic sleep and mood disorders: the phase-response curve. Psychopharmacol Bull 1983; 19:523– 525
- Wirz-Justice A, Buchelli C, Graw P, et al: Light treatment of seasonal affective disorder in Switzerland. Acta Psychiatr Scand 1986; 74:193–204
- 11. Terman M, Quitkin FM, Terman JS: Light therapy for SAD:

- dosing regimens, in New Research Abstracts, 139th Annual Meeting of the American Psychiatric Association. Washington, DC, APA, 1986
- 12. Sack RL, Lewy AJ, Miller LS, et al: Bright light treatment of winter depression. Ibid
- 13. Thompson C, Isaacs G, Stainer DS, et al: Phototherapy and its mechanism of action in seasonal affective disorder. J Affective Disord (in press)
- Checkley S, Wintou F, Franey C, et al: Antidepressant effects of light in seasonal affective disorder, in Abstracts of the Royal College of Psychiatry. Southampton, England, RCP, July 1986
- Wirz-Justice Á, Bucheli C, Schmid AC, et al: A dose relationship in bright white light treatment of seasonal depression. Am J Psychiatry 1986; 143:932-933
- Yerevanian BI, Anderson JL, Grota LJ, et al: Effects of bright incandescent light on seasonal and nonseasonal major depressive disorder. Psychiatry Res 1986; 18:355–364
- Aschoff J. Circadian rhythms: general features and endocrinological aspects, in Endocrine Rhythms. Edited by Krieger DT. New York, Raven Press, 1979
- 18. Czeisler CA, Allan JS, Strogatz SH, et al: Bright light resets the human circadian pacemaker independent of the timing of the sleep-wake cycle. Science 1986; 233:667–671
- DeCoursey PJ: Function of a light response rhythm in hamsters.
 J Cellular and Comparative Physiology 1964; 63:189–196
- Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria: rationale and reliability. Arch Gen Psychiatry 1978: 35:773–782
- 21. Hamilton M: Development of a rating scale for primary depressive illness. Br J Soc Clin Psychol 1967; 6:278–296
- Rosenthal NE, Heffernan MM: Bulimia, carbohydrate craving, and depression: a central connection? in Nutrition and the Brain, vol 7. Edited by Wurtman RJ, Wurtman JJ. New York, Raven Press, 1986
- Hoban TM, Sulzman FM: Light effects on circadian timing system of a diurnal primate, the squirrel monkey. Am J Physiol 1985; 249:R274–R280
- Reinberg A, Halberg F: Circadian chronopharmacology. Annual Review of Pharmacology and Toxicology 1971; 11:455–402
- Jacobsen FM, Rosenthal NE: Seasonal affective disorder and the use of light as an antidepressant. Directions in Psychiatry 1986; 6(3):1-7
- Jacobsen FM, Rosenthal NE: Seasonal affective disorder, in Depression and Mania: A Comprehensive Textbook. Edited by Georgotas A, Cancro R. New York, Elsevier (in press)
- 27. Ross S, Buckalew LW: Placebo agentry assessment of drug and placebo effects, in Placebo: Theory, Research, and Mechanisms. Edited by White L, Tursky B, Schwartz GE. New York, Guilford Press, 1985

Sustained Remission in Drug-Free Schizophrenic Patients

Wayne S. Fenton, M.D., and Thomas H. McGlashan, M.D.

The inability to determine which schizophrenic patients do not require maintenance medication is a significant gap in current knowledge. This report describes 23 largely chronic DSM-III schizophrenic patients who, after a period of inpatient treatment, sustained good outcome without maintenance antipsychotic medication over an average of 15 years. Retrospective study of these patients revealed that their distinguishing characteristics at admission included better premorbid social and occupational adjustment, higher levels of accrued psychosocial competence and acquired skills, fewer hebephrenic traits, and the preservation of affect (depressed mood). Hence, even within a largely chronic patient sample, classic predictors of good outcome may also be useful in predicting sustained remission without medication.

(Am J Psychiatry 1987; 144:1306-1309)

In view of the risks associated with long-term neuroleptics, our inability to determine which schizophrenic patients do not require maintenance medication constitutes a significant gap in current knowledge (1). A review of 29 controlled studies (2) demonstrates the powerful prophylactic effects of antipsychotic drugs but also documents the existence of a substantial, nonrelapsing, placebo subgroup over periods of observation ranging from 3 to 39 months. The most complete study (3–5) suggests that fully 20% of

placebo-treated patients have not relapsed after 2 years. To our knowledge, neuroleptic maintenance has not been studied over longer periods, but it is clear that not all schizophrenic patients require continuous antipsychotic support (6, 7).

Although outcome prediction in schizophrenia per se has often been studied (8-10), specific efforts to characterize patients at low risk for relapse without medication have yielded conflicting results. Prien et al. (11) found that the phenothiazine dose at which patients had a therapeutic response predicted relapse after medication withdrawal. Patients receiving low maintenance doses were least likely to relapse. Two retrospective studies (12, 13) found that patients with acute illness-characterized as nonschizoid and nonparanoid, with good premorbid histories—who improved with placebo treatment had fewer rehospitalizations and better overall functioning at follow-up. In a study of chronic schizophrenic outpatients evaluated with the Hospitalization Proneness Scale, Rosen et al. (14, 15) found that among low-competence patients, phenothiazines reduced the occurrence of hospitalization, but among the high-competence group, phenothiazines were not distinguishable from placebo.

Leff and Wing (16) reported a relatively low (27%) 1-year relapse rate among placebo-treated, good prognosis patients in a double-blind study. They suggested that good prognosis patients (i.e., first episode, good premorbid personality, and short duration of illness) may not need maintenance medication. Kane et al. (17), however, noted that Leff and Wing (16) did not use a comparison group of good prognosis patients receiving phenothiazines. Kane et al. (17) studied 28 patients after remission from an acute first episode of schizophrenia; in the first year no drug-treated patient, but 41% of placebo-treated patients, relapsed. Similarly, among chronic schizophrenic outpatients, Goldberg et al. (18) found that those with good prognostic signs benefited most from neuroleptic prophylaxis over 2 years.

A study of the long-term course and outcome of patients discharged from Chestnut Lodge between 1950 and 1975 allowed the identification of a subgroup of schizophrenic patients who sustained good outcomes, without neuroleptics, over an average of 15 years. This report details the extent to which these patients could be identified retrospectively on the basis of demographic, premorbid, and clinical characteristics at admission.

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received July 7, 1986; revised Jan. 27, 1987; accepted March 17, 1987. From Chestnut Lodge Research Institute. Address reprint requests to Dr. Fenton, Chestnut Lodge Research Institute, 500 West Montgomery Ave., Rockville, MD 20850.

Supported in part by NIMH grant MH-35174 and by the Fund for Psychoanalytic Research of the American Psychoanalytic Association.

The authors thank L. Berman for project coordination and manuscript preparation; A. Benesch for chart abstraction and diagnostic evaluation; R. Marshel and V. Solsberry for outcome evaluation; M. Koontz for statistical consultation; L. Abrams, J. Cook, W. Flexsenhar, K. Free, L. Goldman, A. Gonzalez, W. Greenspun, B. Healy, T. Martin, J. Miller, J. O'Brien, T. Polonus, S. Richfield, R. Spiker, H. Taylor, B. Townsend, D. Unterman, S. Voisinet, R. Welp, and D. Wright for chart abstraction; and D.M. Bullard, Jr., and W. Goodrich for general consultation and manuscript review.

Copyright © 1987 American Psychiatric Association.

METHOD

A detailed methodologic outline of the Chestnut Lodge follow-up study has been presented elsewhere (19, 20). Included were all patients discharged from the hospital between 1950 and 1975 and a smaller cohort of nondischarged inpatients from a comparable period of time.

This report is concerned with two realms of independently collected data: baseline diagnostic/predictor and outcome. For baseline assessment, medical records were transposed and summarized onto a 25-page document called the Chart Abstract (blank forms available on request). Each patient was rated on a broad range of demographic and predictor variables, diagnostic sign and symptom variables, and several sets of diagnostic criteria, including DSM-III. Interrater reliabilities have been reported elsewhere (19).

Outcome data were collected an average of 15 years after discharge (range=2-32 years) through interviews with subjects and/or significant others by a member of the research team who was blind to the patient's baseline data. The information gathered was sufficient to rate multidimensional and global outcome with

adequate reliability (20).

Minimal criteria for assigning follow-up patients to the drug-free, good outcome group included 1) clinical global outcome score of moderate or better, 2) never rehospitalized, and 3) no psychotropic medication use during the follow-up period. Twenty-three (14%) of 163 patients with an index diagnosis of schizophrenia met these criteria.

Overall, drug-free patients with good outcomes proved to be excellent informants and were among the highest functioning individuals in the study. They were employed for 80% of the follow-up period, and 70% (N=16) were married. Sixty-three percent (12 of 19) had attended college after discharge and 31% (six of 19) had obtained a degree. They spent an average of 2 years in psychosocially oriented outpatient treatment without the use of medications after index discharge. In most instances this treatment consisted of individual therapy with the psychiatrists who had treated them as inpatients. After this, most patients eschewed any further psychiatric assistance; at follow-up only 13% (N=3) of these patients were currently in treatment, compared to 74% (N=104) of the remaining schizophrenic patients.

Potential predictors resided in a set of baseline variables traversing sociodemographic and family characteristics, historical items, premorbid functioning, and features of manifest illness (19, 20). Discriminating characteristics were identified by comparing drug-free patients with good outcomes to all other schizophrenic patients across these baseline dimensions by using chi-square analysis for categorical variables and t tests for continuous variables. The predictive power of a set of discriminating characteristics was then evaluated by using multiple regression and discriminant function analyses. Finally, the relation-

TABLE 1. Significant Differences in Premorbid Characteristics Between 23 Drug-Free Schizophrenic Patients With Good Outcomes and 140 Other Schizophrenic Patients Followed Up

	Drug-Patie With Outco	nts Good	Oth Schizopi Patie	hrenic			
Variable ^a	Mean	SD	Mean	SD	t	df	p
Asociality in latency (0=best; 18=worst) Acquisition of skills (4=best; 0=worst) Quality of pre-	6.5	4.0	8.7 2.2	4.8	2.19 -3.81		.04
morbid work (4=very competent; 0= incompetent) Heterosexual functioning (4=best; 0=worst)	2.9	0.8	2.4	1.3	2.39	41 145	.02

^aThe percentages of the two groups that showed instability at work or school were 4% and 26%, respectively ($\chi^2=3.99$, df=1. p=.05).

ship between prognostic status and medication/outcome groups was explored.

RESULTS

Ten percent of the male (N=8 of 83) and 19% of the female (N=15 of 80) schizophrenic patients met the criteria for the drug-free, good outcome group. At admission, these 23 patients were comparable to the remaining schizophrenic cohort in age, marital status, and family socioeconomic condition. The mean±SD age for all subjects was 28 ± 8.1 years, 25% N=40were married, and most were upper-midd'e class (mean±SD level=1.6±0.93; Hollingshead-Redlich). Fathers of the drug-free patients with good outcomes, however, had attained a significantly higher level of education than fathers of the remaining patients (mean±SD level=1.6±.77 versus 2.4±1.6; Hollingshead-Redlich; t=2.8, df=31, p<.009).

Significant differences in premorbid functioning are summarized in table 1. Before the onset of illness. drug-free patients with good outcomes demonstrated better functioning across a range of measures including social relations in latency, heterosexual relations, quality and stability of premorbid work functioning, and accrued psychosocial competence as reflected by acquisition of skills and interests.

Among the schizophrenic patients studied, comparison groups did not differ in age at onset (mean±SD= 19.3 \pm 7.2 years), age at first hospitalization (2.3.3 \pm 6.5 years), months of prior outpatient treatment (17± 23.4), or number of previous hospitalization, (3.1± 2.2). By index admission, patients in both groups were severely and chronically ill, although drug-free patients with good outcomes had spent a significantly shorter period of time hospitalized (10.9 ± 11.7 versus 29.8 ± 38.4 months; t=4.62, df=114, p<.0001).

At admission, drug-free patients with good outcomes were more likely to manifest depressed mood (48% [11 of 23] versus 24% [32 of 133]; χ^2 =4.42, df=1, p<.04) and derealization (39% [7 of 18] versus 14% [18 of 127]; χ^2 =5.12, df=1, p<.02). Although schizophrenic subtypes were not assessed, drug-free patients with good outcomes had significantly lower Elgin 10 scores (21), which measure the frequency and severity of hebephrenic-like symptoms (18.7±4.6 versus 22.4 ± 7.4 ; t=2.93, df=38, p<.006). At index admission, drug-free patients with good outcomes had been continuously psychotic for a shorter interval as rated on the Elgin duration of psychosis subscale $(3.9\pm2.2 \text{ versus } 5.1\pm2.2; \text{ } t=2.34, \text{ } df=160, \text{ } p<.02;$ average of 10 months to 1 year versus 1-2 years). In addition, they scored lower on a 7-point scale of admission global psychopathology (5.2±0.4 versus 5.5 ± 0.6 ; t=2.99, df=39, p<.005).

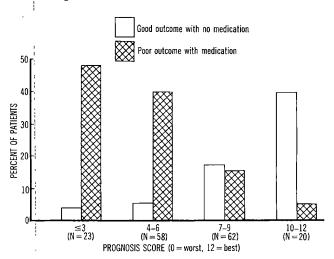
Length of hospitalization was similar in the drugfree patients with good outcomes and the comparison cohort (44±42 versus 49±49 months; n.s.). Drugfree patients with good outcomes, however, were significantly *more* likely to be discharged against medical advice (56% [9 of 16] versus 23% [22 of 97]) and were less likely to be transferred to another institution (19% [3 of 16] versus 57% [55 of 97]; χ^2 =9.62, df=2, p<.008).

Among baseline variables associated with the drugfree group with good outcomes at a trend level, stepwise multiple regression indicated that, independent of all other variables, premorbid acquisition of skills and interests was the best single predictor. Although the entire multiple regression set was highly statistically significant, its predictive power was relatively modest, accounting for only about one-quarter of the outcome variance (multiple R=.48, R²=.23, p<.0001). Stepwise linear discriminant function analysis correctly classified about three-quarters of the patients possessing all discriminating characteristics into the drug-free group with good outcomes (sensitivity).

A prognostic scale for chronic schizophrenia was constructed that conceptualizes prognosis as a dynamic interplay between an individual's highest level of adaptive occupational and social functioning and the "invasiveness" of his or her axis I disorder as estimated by family history of schizophrenia, preservation of affect in psychopathology (depressed mood), and erosion of reality testing (psychotic assaultiveness) (10, 22). Scores ranged from 12 (excellent premorbid social and work functioning, affect preserved, and absence of family history and assaultiveness) to 0 (poor premorbid social and work functioning, absence of affect, positive family history, and assaultiveness).

Figure 1 shows the proportion of drug-free patients with good outcomes in each of four prognostic inter-

FIGURE 1. Percent of Two Groups of Schizophrenic Patients at Various Prognostic Levels^a



a The number of patients at each prognostic level is as follows: score of 3 or less, one good outcome patient with no medication and 11 poor outcome patients with medication; score of 4–6, three and 23 patients, respectively; score of 7–9, 11 and 10 patients, respectively; and score of 10–12, eight patients and one patient, respectively.

vals. Shown for comparison is the proportion of schizophrenic patients at each prognostic interval who demonstrated poor outcome (global scores of 0 or 1) in spite of continuous maintenance neuroleptic treatment over the entire follow-up period. Forty percent of the patients with the best prognosis sustained remission over the long term without medications. This proportion decreased progressively down the prognostic ladder. On the other hand, the fact that few good prognosis but many poor prognosis patients did poorly while using medication may help explain contradictory findings from prospective studies with prognostically mixed patient samples.

DISCUSSION

The patients we studied were treated and discharged during an era when institutional ideology discouraged the use of medication. Most drug-free patients with good outcomes (78%, N=18) were not taking neuroleptics at the time of admission, and those who were had phenothiazines discontinued during their hospitalization. By today's standards, far fewer patients would likely be drug free. Nevertheless, the data presented here demonstrate that over a prolonged postdischarge period, a definite proportion of DSM-III schizophrenic patients sustained good outcome without medication. Furthermore, since drug-free patients with good outcomes did not need and/or were prone to avoid further psychiatric treatment, clinicians and researchers may have underestimated their numbers.

Studied retrospectively, our patients were distinguished by certain demographic, premorbid, and clin-

ical features that, by and large, encompassed classic predictors of outcome in schizophrenia. Duration of illness per se was not predictive, however, since this was largely a chronic sample. Rather, what appeared important was the extent to which, at any time before becoming ill, the patient had acquired skills allowing him or her to embark on a meaningful life path.

Having found variables correlated with sustained remission without medication, we must urge caution in ascribing prospective predictive power to them. Multivariate analyses suggested that drug-free patients with good outcomes derived from the group of patients with good prognostic signs but underscored our limited ability to predict specifically which of these good prognosis patients would do well without medication. It appears that only a subgroup of good prognosis patients, currently unidentifiable, can sustain remission without medication. Taken with the observation that many poor prognosis patients remain continuously disabled despite medication, this hypothesis may explain conflicting reports in the literature. Patients who have done well without medication, when identified and characterized retrospectively, appear as good prognosis patients (12-14). Poor prognosis patients, as a group, tend to relapse with or without medication (23). Therefore, when a prognostically mixed group of schizophrenic patients are followed prospectively in a drug/placebo trial, the good prognosis patients will be found to benefit most from prophylactic medication (18). Thus, we reach the apparent contradiction that good prognosis schizophrenic patients are not only most likely to respond to neuroleptic medications but are also most likely to do well without them.

A second source of inconsistencies across studies is the likelihood that a large portion of outcome variance is explained by characteristics of the social environment to which the patient returns (24). Future studies assessing both patient and environmental prognostic characteristics such as expressed emotion will likely provide the most powerful discriminative models.

Currently we have no established guidelines for identifying which patients have a low risk of relapse without pharmacotherapy; the decision to attempt a trail off of medication remains largely based on clinical judgment. Data presented here and elsewhere, however, suggest that relative risk may best be assessed by the extent to which the skills and capacities of the patient measure up against the complexity and demands of his or her living situation.

REFERENCES

1. Davis JM: Overview: maintenance therapy in psychiatry, I: schizophrenia. Am J Psychiatry 1975; 132:1237-1245

- 2. Davis JM, Schaffer CB, Killian GA, et al: Important issues in the drug teatment of schizophrenia. Schizophr Bull 1980; 6:70-87
- 3. Hogarty GE, Goldberg SC: Drug and sociotherapy in the aftercare of schizophrenic patients: one-year relapse rates. Arch Gen Psychiatry 1973; 28:54-65
- 4. Hogarty GE, Goldberg SC, Schooler NR, et al: Drug and sociotherapy in the aftercare of schizophrenic patients, II: two-year relapse rates. Arch Gen Psychiatry 1974; 31:603-608
- 5. Hogarty GE, Goldberg SC, Schooler NR: Drug and sociotherapy in the aftercare of schizophrenic patients, III: adjustment of nonrelapsed patients. Arch Gen Psychiatry 1974; 31:609-618
- 6. Gardos G, Cole JO: Maintenance antipsychotic therapy: is the cure worse than the disease? Am J Psychiatry 1976; 133:32-36
- 7. Carpenter WT, Heinrichs DW: Treatment-relevant subtypes of schizophrenia. J Nerv Ment Dis 1981; 169:113-119
- 8. Cancro R: Prospective prediction of hospital stay in schizophrenia. Arch Gen Psychiatry 1969; 20:541-546
- 9. Gittelman-Klein R, Klein DF: Premorbid asocial adjustment and prognosis in schizophrenia. J Psychiatr Res 1969; 7:25-53
- 10. McGlashan TH: The prediction of outcome in chronic schizophrenia, IV: the Chestnut Lodge follow-up study. Arch Gen Psychiatry 1986; 43:167-176
- 11. Prien RF, Levine J, Switalski RW: Discontinuation of chemotherapy for chronic schizophrenics. Hosp Community Psychiatry 1971; 22:20-23
- 12. Rappaport M, Hopkins HK, Hall K, et al: Are there schizophrenics for whom drugs may be unnecessary or contraindicated? Int Pharmacopsychiatry 1978; 13:100-111
- 13. Young MA, Meltzer HY: The relationship of demographic, clinical and outcome variables to neuroleptic treatment requirements. Schizophr Bull 1980; 6:88-101
- 14. Rosen B, Englehart DM, Friedman N, et al: The Hospitalization Proneness Scale as a predictor of response to phenothiazine treatment, I: prevention of psychiatric hospitalization. J Nerv Ment Dis 1968; 146:476-480
- 15. Rosen B, Englehart DM, Friedman N, et al: The Hospitalization Proneness Scale as a predictor of response to phenothiazine treatment, II: delay of psychiatric hospitalization. J Nerv Ment Dis 1971; 152:405-411
- 16. Leff JP, Wing JK: Trial of maintenance therapy in schizophrenia. Br Med J 1971; 11:599–604

 17. Kane JM, Rifkin A, Quitkin F, et al: Fluphenazine vs placebo in
- patients with remitted, acute first-episode schizophrenia. Arch Gen Psychiatry 1982; 39:70-73
- 18. Goldberg SC, Schooler NR, Hogarty GE, et al: Prediction of relapse in schizophrenic outpatients treated by drug and sociotherapy. Arch Gen Psychiatry 1977; 34:171-184
- 19. McGlashan TH: The Chestnut Lodge follow-up study, I: follow-up methodology and study sample. Arch Gen Psychiatry 1984; 41:573-585
- 20. McGlashan TH: The Chestnut Lodge follow-up study, II: long-term outcome of schizophrenia and the affective disorders. Arch Gen Psychiatry 1984; 41:586–601
 21. Wittman P: A scale for measuring prognosis in schizophrenic
- patients. Elgin State Hospital Papers 1941; 4:20-23
- 22. Fenton WS, McGlashan TH: Prognostic scale for chronic schizophrenia. Schizophr Bull 1987; 13:277-286
- 23. Kowlakowska T, Williams AD, Adern M, et al: Schizophrenia with good and poor outcome: early clinical features, response to neuroleptics, and signs of organic dysfunction. Br J Psychiatry 1985; 146:229–246
- 24. Vaughn CE, Leff JP: The influence of family and social factors on the course of psychiatric illness: a comparison of schizophrenics and depressed neurotic patients. Br J Psychiatry 1976; 129:125–137

Psychiatric Complications of Disulfiram Treatment

Laure Branchey, M.D., William Davis, Ph.D., Kelvin K. Lee, Ph.D., and Richard K. Fuller, M.D.

disulfiram.

 $(12)_{.1}$

The authors studied psychiatric complications of disulfiram use in 605 alcoholic patients. The subjects were assigned to one of three treatment groups: a 250-mg disulfiram group (N=202), a 1-mg disulfiram group (N=204) to control for the fear of the alcohol-disulfiram reaction, and a no-disulfiram group (N=199) to control for the effect of psychotherapy. No significant differences in the incidence of psychiatric complications were found among the three groups. The authors conclude that if psychiatric complications follow disulfiram use, the incidence must be very low with the doses of disulfiram used presently and in the absence of predisposing factors.

(Am J Psychiatry 1987; 144:1310-1312)

isulfiram has been used in the treatment of alcoholism for more than three decades. Its efficacy has been attributed to the fear produced in patients of developing the alcohol-disulfiram reaction if they drink alcohol after ingesting disulfiram. This reaction, characterized by flushing, hypotension, tachycardia, headaches, dizziness, vomiting, and (infrequently) coma and death, has usually been attributed to the presence of high circulating levels of the ethanol metabolite acetaldehyde. These high levels are caused by the inhibiting effect of disulfiram on the enzyme aldehyde dehydrogenase, which is responsible for the oxidation of acetaldehyde (1, 2). However, acetaldehyde accumulation may not be entirely responsible for the toxic symptoms observed during the alcoholdisulfiram reaction. For example, injections of amounts of acetaldehyde equivalent to those measured during that reaction in subjects not pretreated with disulfiram have been reported to cause hypertension instead of the hypotension observed in patients who develop the alcohol-disulfiram reaction (2). The alcohol-disulfiram reaction may be partly due to factors that have not yet been identified.

In the absence of alcohol, disulfiram has been re-

earlier days, the prevalence of psychotic episodes was estimated at 2%-20% of patients taking the medication. Liddon and Satran (5) reviewed the English language literature on disulfiram in 1967 and found 52 cases in which psychotic behavior was reported. They found equal numbers of patients who manifested mostly symptoms of delirium, who in addition to delirium exhibited psychotic symptoms, or who exhibited psychotic symptoms only (i.e., with no demonstrable organic features). More recently, lower disulfiram doses (250 mg) were used. In a more recent study of 243 patients consecutively admitted to a general psychiatric hospital, five patients taking low doses (250 mg/day) had an acute organic brain syndrome (6). To the best of our knowledge, there has been no systematic survey of the incidence of psychiatric complications in alcoholics treated with the low doses of disulfiram used presently, yet reports of psychotic episodes attributed to disulfiram continue to appear in the literature (7-11). The purpose of the present study

was to assess more fully the psychiatric complications occurring with the use of disulfiram. This study was part of a multicenter investigation, the purpose of

which was to determine whether disulfiram is effective

in the treatment of alcoholism. The design and efficacy

results of this study have been described elsewhere

ported to be responsible for a wide spectrum of

psychiatric complications, including organic brain syn-

dromes, anxiety states, manic and depressive episodes,

paranoia, and schizophrenia. Psychotic episodes have

been attributed to the effects of disulfiram on biogenic

amines and more particularly to its inhibition of the

enzyme dopamine β-hydroxylase, which is responsible

for the conversion of dopamine to norepinephrine (3).

It has been hypothesized that a subsequent increase in dopamine activity in certain brain areas could be

associated with schizophrenic symptoms (1). Another hypothesis has been proposed by Rainey (4) who

observed that some workers in the viscose rayon

industry who were exposed to high levels of carbon disulfide, a metabolite of disulfiram, developed symp-

toms similar to those found in disulfiram neurotoxicity, including delirious states and psychoses; he concluded that carbon disulfide could be responsible for

some of the neurotoxic and psychiatric effects of

With the high doses of disulfiram (1-2 g/day) used in

Received March 3, 1986; revised Oct. 6, 1986, and Jan. 28, 1987; accepted April 2, 1987. From the Bronx VA Medical Center and Mt. Sinai School of Medicine, New York, N.Y. Address reprint requests to Dr. Branchey, Alcohol Research Center, 130 West Kingsbridge Rd., Bronx, NY 10468.

Supported by the VA Cooperative Studies Program.

METHOD

Nine centers participated in this study. They were the Baltimore, Bronx, Columbia, Denver, Los Angeles, Northport, Philadelphia, Topeka, and West Haven VA Medical Centers. Each patient coming for treatment to the alcoholism treatment unit of a participating medical center was screened for eligibility after a physical examination and liver function tests were done.

Men meeting National Council on Alcoholism diagnostic criteria for alcoholism (13) and living with a friend or relative were eligible for the study. Patients were excluded from participating if they were older than 59 years; had a disease or condition that contraindicated the use of disulfiram; had had two or more alcohol-disulfiram reactions; had a present or past history of organic mental disorder, schizophrenia, or affective disorder; had a history of abusing psychotropic drugs; had ingested any ethanol in the past 24 hours; or had been abstinent for more than 1 month. After obtaining informed consent, the participating investigator (who had no involvement in the subsequent treatment of the patient) assigned the patient to one of three treatment groups by opening sequentially numbered envelopes that contained the treatment group assignment.

The three groups included a conventional dose (250) mg/day) disulfiram group and two control groups. The first control group also received disulfiram, but the dose, 1 mg, was insufficient to cause an alcoholdisulfiram reaction although it was sufficient to make patients fear such a reaction. Patients taking disulfiram, either 1 mg or 250 mg, were told that they were receiving the drug but were not informed of the dose. This portion of the study was double-blind; i.e., the therapist was not informed whether the patient received placebo or disulfiram and the patient did not know his disulfiram dose. The second control group, which did not receive disulfiram, was used to control for the effects of the psychotherapeutic treatment provided. Patients in this group received tablets containing 50 mg of riboflavin and were told that they were not receiving disulfiram. This part of the study was single-blind. Riboflavin was also incorporated into the disulfiram tablets and served as a drug marker. Urine specimens, collected at clinic visits and analyzed for presence of ethanol (14), riboflavin (15), and a metabolic degradation product of disulfiram (16), provided one measure of compliance to the drug regimen. The three different tablets, formulated by Ayerst Laboratories, were identical in appearance. Baseline and follow-up data were obtained by a research assistant who was not informed of the patient's medication assignment.

At the time of randomization, the patients and a relative or friend with whom they were living were interviewed to obtain baseline demographic and alcohol consumption information. Each patient was followed for 1 year after discharge from the inpatient detoxification unit. All patients were asked to return at

least once a week for 6 months and then biweekly for the next 6 months for counseling or psychotherapy.

Follow-up data were obtained seven times during the study year by research assistants through interviews with the patients, their relatives, or their friends. If the patients returned to the clinic for the interview, follow-up blood specimens were collected at that time and analyzed for ethanol. Urine specimens collected at treatment visits were also analyzed for the presence of ethanol.

Information covering events during the previous 8 weeks on alcohol consumption variables, changes in psychosocial status, attendance at VA and non-VA treatment units, and hospitalization was solicited during the interviews. Inquiries about possible side effects attributed to the study medication were also made at the bimonthly interviews. In addition, any time a patient reported a possible severe adverse reaction, the participating investigator interviewed the patient and reviewed the clinical record for information regarding the severity and length of the episode, the treatment administered, the results of the treatment, and v hether disulfiram was discontinued. Similar information was obtained whenever a patient was hospitalized. Data on discontinuation of the study medications were also recorded.

RESULTS

Of the 6,629 patients who were screened. 5,011 (76%) did not meet our inclusion criteria, and 1,006 (62%) of the 1,618 eligible men refused to participate. Six hundred and twelve men were randomized. Within a few days after the treatment groups were established, two men decided not to participate, another was discovered to have an affective disorder, and a fourth was ordered by the court to take disulfiram. Two patients were excluded 2 and 3 months, respectively, after randomization because they were found to be ineligible for VA benefits, and one patient was excluded 5 months after randomization because he was found to be a heroin addict. A total of 605 men were ultimately entered into the study.

The 250-mg disulfiram group consisted of 202 men, the 1-mg disulfiram group included 204 men, and 199 men were assigned to the no-disulfiram group. The three groups were comparable with respect to age, race, marital status, employment status, and curation of alcohol abuse. Before the year of follow-up clapsed, 28 men dropped out of the study because o' death, relocation, ineligibility for VA benefits, patients' requests, or medical or psychiatric complications. Five of the seven expected interviews were obtained from the patient, his friend or relative, or both for 80% of the sample, and final interviews were obtained for 92% of the sample.

Psychiatric complications were observed in 11 patients: five were in the 250-mg disulfiram group, three in the 1-mg disulfiram group, and three in the no-

disulfiram group. In the 250-mg disulfiram group, four patients developed a major depressive episode and one, diagnosed as having a schizoaffective disorder, made a suicidal gesture. In the 1-mg disulfiram group, one patient developed a major depressive episode, one a dysthymic disorder, and one an episode of alcohol intoxication accompanied by bizarre behavior. In the no-disulfiram group, one patient was hospitalized on a psychiatric unit for alcohol and unspecified substance abuse and two patients (one of whom made a suicidal gesture) developed a major depressive episode.

The difference in the frequency of psychiatric complications between the three patient groups was tested by chi-square analysis for multiple independent samples, and no significant differences were found.

DISCUSSION

The 1.9% incidence of psychiatric complications for our entire sample was lower than that generally observed in samples of alcoholics, possibly because patients who had a psychiatric history or psychotic symptoms at the time of the initial interview were excluded from the study.

Our 250-mg disulfiram, 1-mg disulfiram, and control groups did not differ significantly with respect to the rate of psychiatric complications. Earlier studies reported much higher percentages of psychiatric symptoms after disulfiram treatment (5) but higher doses of disulfiram were used. The dose of 250 mg/day that we used is the average maintenance dose recommended by Ayerst Laboratories and the most common dose currently used by clinicians in the United States. Other researchers (17) have not found a significant difference in the rate of physical side effects, such as tiredness, sleepiness, dizziness, poor memory, headache, unpleasant taste, gastrointestinal disturbances, and rash, between patients taking 200 mg/day of disulfiram and patients taking placebo.

It has been suggested that disulfiram could activate a preexisting psychosis (1). A study of schizophrenic patients and nonschizophrenic control subjects admitted to a research unit and given doses of disulfiram as high as 1.5 g found that the schizophrenic patients became more severely ill physically and exhibited a worsening of their psychotic symptoms (18). The schizophrenic patients lost weight, developed hypertension, became dyspneic, and complained of chest pain; the control subjects gained weight and developed less severe hypertension than the schizophrenic patients. The schizophrenic patients manifested an increase in hallucinatory activity, delusional thinking, autism, and depersonalization; the control subjects did

not develop any of these phenomena. The activation of a preexisting psychosis is not likely to have played a major role in our findings because of the efforts to screen out patients who were psychotic or who had a history of psychiatric illness.

Our study does not exclude the possibility that psychiatric complications can follow disulfiram use, but if they do, the incidence must be very low with the doses of disulfiram used presently and in the absence of predisposing factors.

REFERENCES

- Nasrallah HA: Vulnerability to disulfiram psychosis. West J Med 1979; 130:575–577
- Wise DJ: Disulfiram toxicity: a review of the literature. J Arkansas Med Soc 1981; 70:82-92
- Goldstein M, Anagnoste B, Lauber E, et al: Inhibition of dopamine-β-hydroxylase by disulfiram. Life Sci 1964; 3:703– 707
- Rainey JM: Disulfiram toxicity and carbon disulfide poisoning. Am J Psychiatry 1977; 134:371

 –378
- Liddon SC, Satran R: Disulfiram (Antabuse) psychosis. Am J Psychiatry 1967; 123:1284

 –1289
- Knee ST, Razani J: Acute organic brain syndrome: a complication of disulfiram therapy. Am J Psychiatry 1974; 131:1281– 1282
- Kirubakaran V, Liskow B, Mayfield D, et al: Case report of acute disulfiram overdose. Am J Psychiatry 1983; 140:1513– 1514
- L'emperiere T, Ades J, Hardy P: Complications neuropsychiques des traitements au disulfiram: a propos d'une observation. Comptes Rendus de la Société Médico-psychologique, Dec 21, 1981, pp 123–129
- Weddington WW, Marks R, Verghese P: Disulfiram encephalopathy as a cause of the catatonia syndrome. Am J Psychiatry 1980; 137:1217–1219
- 10. Wenzel R, Bittersmann A: Uber disulfiram psychosen. Z Arztl Fortbild (Jena) 1981; 75(22):1077-1079
- Wilson WH: Disulfiram and encephalopathy (letter). Hosp Community Psychiatry 1984; 35:496–497
- 12. Fuller RK, Branchey L, Brightwell DR, et al: Disulfiram treatment of alcoholism: a Veterans Administration cooperative study. JAMA 1986; 256:1449–1455
- Criteria Committee, National Council on Alcoholism: Criteria for the diagnosis of alcoholism. Ann Intern Med 1972; 77:249– 258
- Hodnett N, Sunshine I: Evaluation of gas chromatographic and distillation procedures for the determination of ethanol in biological material, in Biochemical and Clinical Aspects of Alcohol Metabolism. Edited by Sardesai VM. Springfield, Ill, Charles C Thomas. 1969
- Charles C Thomas, 1969
 15. Hobby GL, Deuschle KW: The use of riboflavin as an indicator of isoniazid ingestion in self-medicated patients. Am Rev Respir Dis 1959; 80:415-423
- Neiderhiser DH, Fuller RK, Hejduk LJ, et al: Method for the detection of diethylamine, a metabolite of disulfiram, in urine. J Chromatogr 1976; 117:187–192
- Christensen JK: Side effects after Antabuse—myths or reality? Br J Clin Pract (Symp Suppl) 1984; 36:21-28
 Heath RG, Nesselhof W, Bishop MP, et al: Behavioral and
- 18. Heath RG, Nesselhof W, Bishop MP, et al: Behavioral and metabolic changes associated with administration of tetraethylthiuram disulfide (Antabuse). Dis Nerv Syst 1965; 29:99–105

CSF Somatostatin in Patients With Alzheimer's Disease, Older Depressed Patients, and Age-Matched Control Subjects

Trey Sunderland, M.D., David R. Rubinow, M.D., Pierre N. Tariot, M.D., Robert M. Cohen, M.D., Ph.D., Paul A. Newhouse, M.D., Alan M. Mellow, M.D., Ph.D., Edward A. Mueller, M.D., and Dennis L. Murphy, M.D.

Somatostatin-like immunoreactivity was measured in the CSF of 12 patients with Alzheimer's disease, 15 age-matched control subjects, and 20 older depressed subjects. Patients with dementia or depression were found to have lower CSF somatostatin concentrations than control subjects despite markedly different clinical presentations. Severity of depression was clearly different in all three groups but showed no significant correlation with CSF concentration of somatostatin. There was a significant positive correlation between CSF somatostatin-like immunoreactivity and cognitive functioning in all 47 subjects, but this association was not statistically significant within individual diagnostic groups. These data raise interesting questions about possible biological links between Alzheimer's disease and depression in older patients. (Am J Psychiatry 1987; 144:1313-1316)

A part from the well-known cholinergic deficit in dementia of the Alzheimer type (1, 2), the reduction in brain and CSF somatostatin-like immunoreactivity is probably the best documented biochemical abnormality in the disease (3–9). Somatostatin has also been found to be diminished in the CSF of young patients with depression, Parkinson's disease, and multiple sclerosis and in other neuropsychiatric populations (10–13). In Alzheimer's disease, the significance of lower somatostatin-like immunoreactivity is supported by autopsy and CSF studies where deficits in brain somatostatin-like immunoreactivity have been

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received June 30, 1986; revised Nov. 19, 1986; accepted Feb. 17, 1987. From the Unit on Geriatric Psychopharmacology, Laboratory of Clinical Science; the Section on Psychobiology, Biological Psychiatry Branch; and the Section on Clinical Brain Imaging, Laboratory of Cerebral Metabolism, NIMH. Address reprint requests to Dr. Sunderland, Unit on Geriatric Psychopharmacology, Laboratory of Clinical Science, NIMH, Bldg. 10, Rm. 3D/41, Bethesda, MD 20892.

The authors thank Candy Davis for technical assistance in the

The authors thank Candy Davis for technical assistance in the laboratory, Karen Thompson for psychometric evaluations of the subjects, and Gloria Goldsmith and Margaret Waters for typing the manuscript.

highly correlated with lower choline acetyltransferase, less cholinesterase activity, and the severity of dementia (3, 7, 14). Somatostatin-like immunoreactivity has also been reported to colocalize with cholinesterase activity in rat cerebral neurons (15) and is found in the neuritic plaques and neuronal tangles of the brains of Alzheimer patients at autopsy (16, 17). More recently, somatostatin receptors have been found to be reduced in the cortex of brains of Alzheimer patients (18).

Although the biochemical link between somatostatin-like immunoreactivity and depression is primarily supported by previous CSF studies (10, 19, 20), there are known behavioral effects following somatostatin administration to animals. These include altered sleep (including REM sleep), locomotor disturbances, appetite dysregulation, and altered pain sensitivity, which suggest possible connections between somatostatin-like immunoreactivity and clinical symptoms of affective disorder in humans (10). With increasing age, depression can be accompanied clinically by varying degrees of cognitive impairment suggestive of a dementing process. A presentation of depression and memory problems in the elderly (pseudodementia) can therefore frequently complicate the differential diagnosis of either depression or dementia (21). However, to our knowledge there have been no previous reports of measurement of somatostatin-like immunoreactivity in the CSF of older depressed subjects.

In the light of previous findings of lower CSF somatostatin-like immunoreactivity in younger depressed patients and the potential confusion in the differentiation of dementia and depression accompanied by cognitive impairment in geriatric patients, we measured CSF somatostatin-like immunoreactivity, degree of depression, and severity of dementia in groups of clinically diagnosed patients with Alzheimer's disease, older depressed patients, and age-matched control subjects.

METHOD

The subjects included 12 patients with Alzheimer's disease (mean±SD age=61.2±11.4 years), 20 depressed patients (mean age=58.7±11.4 years), and 15

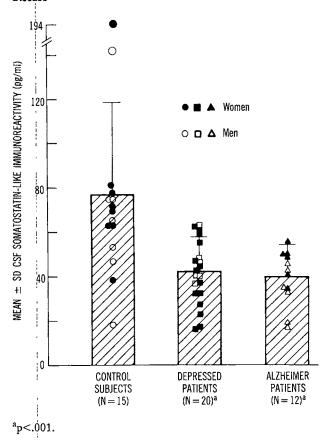
age-matched normal control subjects (mean age= 59.5 ± 7.9 years). The clinical diagnoses of primary degenerative dementia and major affective disorder were made according to DSM-III criteria. Although the diagnosis of Alzheimer's disease can never be certain until biopsy or autopsy confirmation, the patients were carefully screened for other major medical problems. Subjects with dementia were excluded from the study if they showed clinical evidence of multiinfarct dementia or scored greater than 3 on the Hachinski scale (22), a rating designed to identify those at greater risk for cerebrovascular accidents. Four of the 20 depressed patients showed mild cognitive impairment, with complaints of short-term memory deficits temporally related to the course of their affective symptoms. Normal control subjects were screened to exclude those with substantial medical, cognitive, or psychiatric disorders. All control subjects were healthy volunteers recruited from the local community and paid to participate in this study. All subjects gave their written informed consent. The degree of depression was assessed by the Hamilton Rating Scale for Depression (23); Hamilton scores were available for 27 subjects—12 with Alzheimer's disease, eight with depression, and seven control subjects. Cognitive capacities were measured with the Wechsler Memory Quotient (24) on the same 27 subjects.

All lumbar punctures were performed on patients and normal volunteers in the lateral decubitus position between 8:00 and 9:00 a.m. after an overnight fast. No subject had received medications for at least 3 weeks, and all subjects were kept at bed rest before the procedure except for voiding. The 26th ml of CSF obtained was immediately frozen without preservative on dry ice and then stored at -70° C for subsequent measurement of somatostatin. Cerebrospinal fluid from earlier aliquots was pooled and used for clinical measures, including CSF protein, or frozen at -70°C and subsequently thawed for measurement of the neurotransmitter metabolites 3-methoxy-4-hydroxy-phenylethylglycol (MHPG), 5-hydroxyindoleacetic acid (5-HIAA), and homovanillic acid (HVA) (25) in a limited number of subjects. The CSF monoamine metabolites were available for the same 27 subjects who had Hamilton and Wechsler scores.

Somatostatin was assayed by radioimmunoassay using ¹²⁵I-tyrosine rabbit antisomatostatin antiserum (provided by Seymour Reichlin, Tufts University), synthetic cyclic somatostatin standards, and charcoal separation, as described elsewhere (26). The sensitivity of the assay is 1 pg/tube, with a 50% inhibition concentration (IC 50) of 8.6 pg/tube. The antisomatostatin antibody is directed toward the midportion of the tetradecapeptide and therefore recognizes N-terminal extensions of SRIF-14, such as SRIF-28. Intraassay and interassay coefficients of variation for the somatostatin immunoassay were 10% and 12%, respectively.

Statistical analyses included one-way analysis of variance (ANOVA) with Tukey's honestly significant

FIGURE 1. CSF Somatostatin Levels in Age-Matched Control Subjects, Older Depressed Patients, and Patients With Alzheimer's Disease



difference for paired comparisons as well as Pearson's product-moment for correlations and Student's t tests for male-female comparisons. Data are presented as mean±standard deviation of the mean unless otherwise noted.

RESULTS

Alzheimer patients and depressed patients both demonstrated markedly lower concentrations of CSF somatostatin-like immunoreactivity (39.3 pg/ml and 41.8 pg/ml, respectively) than age-matched normal control subjects (76.5 pg/ml) (F=8.66, df=2, 44, p<.001) (figure 1). The differences between the Alzheimer and depressed groups were not significant. There were no significant age differences among the three groups tested (F=0.21, df=2, 44, p=.81), and age did not correlate with somatostatin-like immunoreactivity in any of the groups. Within the Alzheimer group, seven of the patients had presenile-onset and five had senile-onset (age greater than 65 years) dementias; there were no significant differences between these patients in their respective CSF somatostatin levels (37.8±10.6 pg/ml versus 41.5±14.8 pg/ ml, p>.40). Gender was also not a statistically significant factor, although women had slightly higher CSF concentrations of somatostatin-like immunoreactivity than men in the total group of 47 subjects (54.8 ± 9.9 pg/ml versus 46.2 ± 18.1 pg/ml, t=1.51, df=45, p>.05). Among the 12 Alzheimer patients, the women had a significantly higher CSF somatostatin-like immunoreactivity than did the men (46.4 ± 7.3 pg/ml versus 32.3 ± 11.9 pg/ml, t=2.48, df=10, p<.05).

There were significant differences between groups in degree of depression as measured by Hamilton depression scores: 13.3±7.3 for the Alzheimer patients, 27.3 ± 11.3 for the depressed patients, and 4.5 ± 2.3 for the control subjects (F=15.91, df=2, 24, p<.001), although the degree of depression did not significantly correlate with CSF concentrations of somatostatin-like immunoreactivity in any group. Across all 47 subjects, there was a significant correlation between the Wechsler Memory Quotient and CSF somatostatinlike immunoreactivity (r=.65, p<.01). Within the individual groups, however, there were no significant correlations. Although not statistically significant, the association between the Wechsler score and CSF somatostatin-like immunoreactivity (r=.38, N=12, p= .20) does approximate that found in an earlier study with larger numbers of demented patients (7), where the association (r=.35) was statistically significant. The four depressed patients with mild memory deficits and low Wechsler scores (98±11.0) had CSF somatostatin-like immunoreactivity concentrations slightly above the mean of the depressed group $(55.9\pm10.0 \text{ pg/}$ ml) but still below the mean for control subjects $(76.5\pm44.4 \text{ pg/ml})$. There were no significant overall correlations between CSF somatostatin-like immunoreactivity and any of the monoamine metabolites measured (MHPG, 5-HIAA, and HVA).

DISCUSSION

In this first study directly comparing CSF somatostatin-like immunoreactivity in Alzheimer patients and older depressed patients, both groups were found to have significantly lower somatostatin-like immunoreactivity than age-matched control subjects. The lack of significant differences between the Alzheimer patients and an older depressed population suggests that CSF somatostatin-like immunoreactivity concentration alone would not be helpful for differential diagnostic purposes when depressed patients show symptoms of cognitive impairment. However, the similarly lower levels of CSF somatostatin-like immunoreactivity do raise intriguing questions. Presumably, the lower levels in Alzheimer's disease are caused by the damage and degeneration of somatostatin-containing neurons in the CNS, whereas the reversible deficit of CSF somatostatin-like immunoreactivity in depression may reflect state-dependent dysfunction in the somatostatin-containing cells (15, 16, 27).

Support for the role of somatostatin in cognitive processes comes from animal studies in which decreases in somatostatin-like immunoreactivity caused by intracerebroventricular injections of cyste unine were associated with decreased active avoidance earning, whereas similar injections of somatostatin itself facilitated the learning paradigm (28). Other support comes from the evidence for colocalization of so natostatin with cholinergic markers in rat brain (15), stimulation of somatostatin release from culture! cortical cells following muscarinic agonists (29), numerous documented interactions with central cholinergic and monoaminergic systems (30, 31), and the s gnificant correlation found in a previous study be ween CSF somatostatin-like immunoreactivity and cognitive functioning in Alzheimer patients (7). In addition, other clinical syndromes with reports of reduced CSF somatostatin-like immunoreactivity, such as Parkinson's disease, multiple sclerosis, and Huntington's disease, have all been associated with cognitive in apairments (10–13, 32, 33). Initial attempts to treat Alzheimer patients with a peripherally administered so natostatin analogue have thus far failed to achieve reasonable CSF levels of the drug or produce sign ficant memory improvements (34). As yet, there are no published studies reporting the therapeutic utility of somatostatin or the analogues with affective or lognitive impairments in geriatric depression.

The lack of correlation between CSF somato tatinlike immunoreactivity and severity of depress on in this study is not surprising given the absence o relationship previously reported in younger depressed patients (10) and the general difficulty in measuring depression in a population with Alzheimer's cisease (35). Although the Alzheimer subjects did in some cases show evidence of depression, as documen ed by their Hamilton depression scores, their ratings were generally low and also did not significantly co relate with CSF somatostatin-like immunoreactivity. As has been the case in other studies, age did not appea to be associated with changes in CSF somatostat n-like immunoreactivity in normal subjects or in either of the two patient groups. The significant difference, seen previously in CSF somatostatin concentrations between neurohistologically confirmed presenile and senile dementia patients (6) were not observed in this small group of clinically diagnosed patients. Alt rough there were small gender differences in CSF levels of somatostatin-like immunoreactivity, these differences were not significant and did not affect the overall group differences.

Numerous neurotransmitter systems are known to interact with somatostatin-containing neurons, including acetylcholine, norepinephrine, dopamine, γ -aminobutyric acid, and the endorphins (36, 37). These neurotransmitters and others, including serotom, are implicated in both dementia and affective syncromes (27, 38). Nonetheless, none of the monoamine metabolites was found to correlate with CSF somatostatin-like immunoreactivity in the overall group or my of the individual populations studied. In fact, the relationship between CSF somatostatin-like immunoreactivity and CSF 5-HIAA found previously with younger

depressed adults (10) was not seen in this group of older depressed adults. These findings certainly do not explain why both patients with diseases of the Alzheimer type and older depressed patients have reduced CSF somatostatin-like immunoreactivity concentrations, but they do document an abnormality of a central peptidergic neuronal system in two pathogenetically different but clinically overlapping illnesses. Further study, perhaps with larger groups of patients, may help elucidate the factors that regulate CSF somatostatin concentration and influence clinical symptoms.

REFERENCES

- Davies P, Maloney AJ: Selective loss of central cholinergic neurons in Alzheimer's disease. Lancet 1976; 2:1403–1405
- 2. Whitehouse PJ, Price DL, Struble RG, et al: Alzheimer's disease and senile dementia: a loss of neurons in the basal forebrain. Science 1982; 215:1237–1239
- 3. Davies P, Terry RD: Cortical somatostatin-like immunoreactivity in cases of Alzheimer's disease and senile dementia of the Alzheimer type. Neurobiol Aging 1981; 2:15–25
- Wood PL, Étienne P, Lal S, et al: Reduced lumbar CSF somatostatin levels in Alzheimer's disease. Life Sci 1982; 31: 2073-2079
- 5. Serby M, Richardson SB, Twente S, et al: CSF somatostatin in Alzheimer's disease. Neurobiol Aging 1984; 5:187–189
- Francis PT, Bowen DM, Neary D, et al: Somatostatin-like immunoreactivity in lumbar cerebrospinal fluid from neurohistologically examined demented patients. Neurobiol Aging 1984; 5:183–186
- Soininen HS, Jolkkonen JT, Reinkainen KJ, et al: Reduced cholinesterase activity and somatostatin-like immunoreactivity in the cerebrospinal fluid of patients with dementia of the Alzheimer type. J Neurol Sci 1983; 63:167–172
- Oram JJ, Edwardson J, Millard PH: Investigation of cerebrospinal fluid neuropeptides in idiopathic senile dementia. Gerontology 1981; 27:216–223
- Raskind MA, Peskind ER, Lampe TH, et al: Cerebrospinal fluid vasopressin, oxytocin, somatostatin, and β-endorphin in Alzheimer's disease. Arch Gen Psychiatry 1986; 43:382–388
- 10. Rubinow DR, Gold PW, Post RM, et al: CSF somatostatin in affective illness. Arch Gen Psychiatry 1983; 40:409–412
- Dupont E, Christensen SE, Hansen AP, et al: Low cerebrospinal fluid somatostatin in Parkinson's disease: an irreversible abnormality. Neurology 1982; 32:312–314
- 12. Sorensen KV, Christensen SE, Dupont E, et al: Low somatostatin content in cerebrospinal fluid in multiple sclerosis. Acta Neurol Scand 1980; 61:186–191
- 13. Schroter E: Huntington's chorea: measurements of somatostatin, substance P and cyclic nucleotides in the cerebrospinal fluid. J Neurol 1981; 225:183–187
- Tamminga CA, Foster NL, Chase TN: Reduced brain somatostatin levels in Alzheimer's disease. N Engl J Med 1985; 313: 1294–1295
- 15. Delfs JR, Zhu C-H, Dichter MA: Coexistence of acetylcholinesterase and somatostatin-immunoreactivity in neurons cultured from rat cerebrum. Science 1984; 223:61–63
- Morrison JH, Rogers J, Scherr S, et al: Somatostatin immunoreactivity in neuritic plaques of Alzheimer patients. Nature 1985; 314:90-92
- 17. Roberts GW, Crow TJ, Polak JM: Localization of neuronal

- tangles in somatostatin neurons in Alzheimer's disease. Nature 1985: 314:92-94
- 18. Beal MF, Mazurek MF, Tran VT, et al: Reduced numbers of somatostatin receptors in the cerebral cortex in Alzheimer's disease. Science 1985; 229:289–291
- Gerner RH, Yamada T: Altered neuropeptide concentrations in cerebrospinal fluid of psychiatric patients. Brain Res 1982; 238: 298-302
- Bissette G, Widerlöv E, Walléus H, et al: Alterations in cerebrospinal fluid concentrations of somatostatinlike immunoreactivity in neuropsychiatric disorders. Arch Gen Psychiatry 1986; 43:1148–1154
- Reifler BV, Larson E, Hanley R: Coexistence of cognitive impairment and depression in geriatric outpatients. Am J Psychiatry 1982; 139:623-626
- 22. Hachinski VC, Ilif LD, Phil M, et al: Cerebral blood flow in dementia. Arch Neurol 1975; 32:632–637
- Hamilton M: A rating scale for depression. J Neurol Neurosurg Psychiatry 1960; 23:56–62
- Wechsler D: Standardized memory scale for clinical use. J Psychol 1945; 19:87–95
- 25. Scheinin M, Chank W, Kirk KL, et al: Simultaneous determination of 3-methoxy-4-dihydroxyphenylglycol, 5-hydroxyindoleacetic acid, and homovanillic acid in cerebrospinal fluid with high-performance liquid chromatography using electrochemical detection. Anal Biochem 1983; 131:246–253
- Patel YC, Rao K, Reichlin S: Somatostatin in human cerebrospinal fluid. N Engl J Med 1977; 296:529–533
- Gottfries GG: Alzheimer's disease and senile dementia: biochemical characteristics and aspects of treatment. Psychopharmacology 1985; 86:245–252
- Vecsei L, Kiraly C, Billok I, et al: Comparative studies with somatostatin and cysteamine in different behavior tests on rats. Pharmacol Biochem Behav 1984; 21:833–837
- Robbins RJ, Sutton RE, Reichlin S: Effects of neurotransmitters and cyclic-AMP on somatostatin release from cultured cerebral cortical cells. Brain Res 1982; 243:377–386
- cortical cells. Brain Res 1982; 243:377–386
 30. Malthe-Sørenssen D, Wood PL, Cheney DL, et al: Modulation of the turnover rate of acetylcholine in rat brain by intraventricular injections of thyrotropin-releasing hormone, somatostatin, neurotensin and angiotensin II. J Neurochem 1978; 31: 685–691
- 31. García-Sevilla JA, Magnusson T, Carlsson A: Effect of intracerebroventricularly administered somatostatin on brain monoamine turnover. Brain Res 1978; 155:159–164
- Weingartner H, Grafman J, Bontelle W, et al: Forms of memory failure. Science 1983; 221:380–382
- Caine ED, Bamford KA, Shiffer RB, et al: A controlled neuropsychological comparison of Huntington's disease and multiple sclerosis. Arch Neurol 1986; 43:249–254
- 34. Cutler NR, Haxby JV, Narang PK, et al: Evaluation of an analogue of somatostatin (L363,586) in Alzheimer's disease (letter). N Engl J Med 1985; 312:725
- 35. Miller N: The measurement of mood in senile brain disease: examiner ratings and self reports, in Psychopathology in the Aged. Edited by Cole JO, Barrett SE. New York, Raven Press, 1980
- Reichlin S: Somatostatin in the nervous system, in Molecular Genetic Neuroscience. Edited by Schmitt FO, Bird SJ, Bloom FE. New York, Raven Press, 1982
- Rubinow D: Cerebrospinal fluid somatostatin and psychiatric illness. Biol Psychiatry 1986; 21:341–365
- 38. Blier P, De Montigny C: Neurobiological basis of antidepressant treatments, in Pharmacotherapy of Affective Disorders: Theory and Practice. Edited by Dewhurst WG, Baker GB. London, Croon Helm, 1985

A Laboratory Procedure for the Induction of Flashbacks

John M. Rainey, Jr., M.D., Ph.D., Asaf Aleem, M.D., Aurelio Ortiz, M.D., D.Sc. Vikram Yeragani, M.D., Robert Pohl, M.D., and Richard Berchou, Pharm.D.

The authors administered infusions of lactate intravenously to seven patients with a DSM-III diagnosis of posttraumatic stress disorder, six of whom also met DSM-III criteria for panic disorder. The lactate infusions resulted in flashbacks in all seven patients and panic attacks in six patients. The authors conclude that with further development intravenous lactate infusion may be used to study flashbacks and other dissociative phenomena and to determine the relationship between flashbacks and panic anxiety.

(Am J Psychiatry 1987; 144:1317–1319)

flashback is a reexperience of a traumatic event with realistic intensity in the presence of a clear sensorium (1). Visual and auditory hallucinations, depersonalization, and derealization occur during flashbacks, suggesting that they are dissociative phenomena (1, 2). Although flashbacks occur in association with loud noises, fatigue, and personal stress (2), we know of no reliable method for producing them. The objective of this study was to develop a procedure for the induction of flashbacks.

METHOD

The procedure was adapted from a previously published method for the induction of panic anxiety in patients with panic disorder (3, 4). It uses three intravenous infusions administered double-blind in random order at intervals of 5-7 days; each subject receives all three infusions. For this study we prepared each solution on the day of the infusion using 5 meg/ ml vials of racemic sodium lactate (Abbott La soratories, North Chicago, Ill.) or 0.2 mg/ml isopreterenol (Elkins-Senn, Inc., Cherry Hill, N.J.) and 5% d xtrose in sterile water (Abbott Laboratories). The in usions consisted of 6 ml/kg of 1 M racemic sodium la tate in 5% dextrose in water, 20 µg of isoproterenol i · 6 ml/ kg of 5% dextrose in water, and 6 ml/kg of 5% dextrose in water. We administered each infusion through a 21-gauge butterfly needle or a 2. gauge intracatheter placed in an antecubital vein using a single Ivac 560 variable-volume infusion punna (Ivac Corp., San Diego) to control the infusion cate in subjects weighing less than 56 kg and two pumps in parallel for subjects weighing 56 to 111 kg.

A slow drip of 5% dextrose in water was used to keep the infusion line open for 20 minutes before and after each infusion. The subjects rated symptoms of posttraumatic stress disorder and panic anxiety every 2 minutes on two scales derived from DSM-III criteria for posttraumatic stress disorder and panic anxiety beginning 10 minutes before each infusion and continuing for the next 40 minutes. Heart rate and blood pressure were measured by using a Dinamap vital signs monitor (Critikon, Inc., Tampa, Fla.), blood samples for lactate and blood gas analysis were drawn from a heparin lock placed in an antecubital vein of the other arm, and metabolic measurements were made by using a Horizon Systems 6 Metabolic Measurements Cart (Sensormedics Corp., Anaheim, Calif.) at the same time intervals. After 10 minutes of baseline ratings we began each infusion at a rate adjusted to deliver the full volume over 20 minutes. We stopped the infusions if the patients rated a flashback as severe, reporte I severe anger, or had a severe fear of loss of control. Vie were also prepared to administer 10 mg of diazepar or 10 mg of propranolol intravenously if a patient became violent or reported that the symptoms were be coming worse after an infusion was stopped. After each infusion the patients were asked to rate the severit. of the symptoms and their similarity to naturally occurring symptoms of posttraumatic stress disorder and panic anxiety.

We used this procedure in seven subjects, on with a past history of posttraumatic stress disorder v ho met DSM-III criteria for panic disorder and six who met DSM-III criteria for both posttraumatic stress conden and panic disorder. All seven patients were mer 34-43 years old who had had combat experience in Vietnam

Supported in part by a grant from the Veterans Administration

and by the State of Michigan.

Copyright © 1987 American Psychiatric Association.

Received June 30, 1986; revised Dec. 5, 1986, and Jan. 30, 1987; accepted March 24, 1987. From the Anxiety Disorders Research Program, Department of Psychiatry, Wayne State University School of Medicine, Detroit; Lafayette Clinic, Detroit; and the Allen Park VA Hospital, Allen Park, Mich. Address reprint requests to Dr. Rainey, Lafayette Clinic, 951 East Lafayette, Detroit, MI 48207.

The authors thank Paula Weinberg, M.S.N., Sharon Marshall, B.S.N., Ken Warner, and Stewart Bates for their contributions to the research reported in this paper.

and who had a history of flashbacks. Each received physical, laboratory, and psychiatric examinations; met the exclusion criteria for physical illnesses and the age requirements for the use of this procedure in patients with panic disorder (3, 4); and gave written informed consent to participate in the study. As part of the consent process the patients were told that they would receive lactate, isoproterenol, and 5% dextrose in water and that the lactate and isoproterenol infusions might result in flashbacks and panic attacks. They were also told that neither they nor the laboratory personnel would know the order of the infusions except for one person who would know for safety reasons. They were not told who that person was.

RESULTS

All seven patients had flashbacks during lactate infusion, two had flashbacks during isoproterenol infusion, and one had a flashback during 5% dextrose in water infusion. All flashbacks were to events the patients had actually experienced. Three of the lactate flashbacks (patients 3, 5, and 6) were to events that occurred in hospitals after a traumatic event. Patient 3 had received a chest wound in his first combat injury in Vietnam and saw himself in surgery watching his own operation. Patient 5 saw himself strapped down in a hospital after passing out, falling off an armored vehicle, and having a seizure. Patient 6 experienced a brief flashback to a nervous breakdown and hospitalization. Two other subjects (patients 2 and 4) had isoproterenol flashbacks that occurred again and again, apparently in synchrony with the 2-minute cycle of the ratings. Patient 2 experienced repeated confrontations with his commanding officer, who questioned his performance in the field. Patient 4 saw himself repeatedly killing a village woman who was North Vietnamese. He would kill her, she would get up, and he would kill her again. He stated that it was "like watching a movie in Technicolor." With one exception (patient 7, during lactate infusion), the flashbacks began gradually, increased in intensity and severity over a 4-6 minute period, and disappeared within 1-2 minutes when the infusion was stopped. Patient 7 continued to have a gradually diminishing flashback with associated symptoms of panic anxiety that disappeared over an 8-10-minute period.

Six of the seven lactate and one of the two isoproterenol flashbacks were followed by anxiety states meeting DSM-III criteria for panic attacks. The panic attacks generally occurred within 1–4 minutes of the onset of a flashback and gradually increased in intensity until the infusion was stopped. There was also one 5% dextrose in water flashback accompanied by a panic attack and one isoproterenol panic attack without a flashback.

The procedure did not result in violent behavior or require the use of propranolol or diazepam. The results of the ratings of symptoms of posttraumatic stress disorder and the measurements of heart rate, blood pressure, blood lactate and gases, and metabolic indexes will be reported separately.

DISCUSSION

The 10 flashbacks that occurred during the infusions were similar to naturally occurring flashbacks, which have been described as intense experiences that usually last seconds to minutes and may be accompanied by visual, auditory, and olfactory hallucinations, distortions, or illusions; pain; depersonalization; and derealization (1, 2). Eight of the 10 flashbacks were associated with panic attacks; the flashbacks preceded the panic attacks in seven of these eight. In a recent study (2), 25 of 25 Vietnam veterans with posttraumatic stress disorder reported that their flashbacks occurred during anxiety states meeting DSM-III criteria for panic attacks. We are not certain if our findings represent a difference between naturally occurring and infusion-induced flashbacks, if flashbacks usually precede panic attacks, or if they are a result of the small number of subjects in our sample. The absence of panic attacks after two of the flashbacks may have been a result of our procedure for stopping the infusions if a flashback occurred. This may also have decreased the intensity of the flashbacks and panic attacks in most of the patients and reduced the possibility of violence during the infusions.

The laboratory setting, the experimental procedures, and the ratings appeared to influence both the content and the severity of the flashbacks, consistent with the finding that social context has an effect on the flashback experience (5). The three patients who had flashbacks to events that occurred in hospital settings said the intravenous lines, face masks, equipment, and personnel in the laboratory reminded them of the hospitals they were taken to in Vietnam. The patient who experienced repeated confrontations with his commanding officer got angrier and angrier as the questions on the rating scales were repeated. He felt that both the officer and the rater were asking stupid questions. The patient who relived killing the North Vietnamese woman saw her get up and himself killing her again with each repetition of the questions on the rating scales. Several of the patients said that having to constantly concentrate on answering questions about what was happening to them kept them from dissociating completely and decreased the intensity of the depersonalization and derealization they experienced. This also affected the ratings of resemblance to naturally occurring flashbacks, since the patients had not had these flashbacks previously, usually had had more severe flashbacks, or could not remember what happened during a flashback. Denial and fears of loss of control also affected the ratings. The patients had been trained while in the service to deny any feelings of fear, and all of them had a history of physical violence during flashbacks. For example, patient 2 stated that he had denied having symptoms through most of the lactate infusion because he was afraid that if he admitted having them he would actually lose control and become physically violent.

Except for patient 6, all the men became depressed and felt guilty during the flashbacks. Patient 2 said that if we had not stopped the isoproterenol infusion he would have started to cry, and patient 7 burst into tears during a lactate flashback as he saw his best friend blown up by a booby-trapped hand grenade. This is consistent with the occurrence of depression in patients with panic disorder as well, although there are additional cognitive components associated with flashbacks that are absent during pure panic anxiety.

The use of a double-blind placebo-controlled design with randomized assignment to three different infusions reduced the possibility that the flashbacks were a result of experimental demand on the subjects. In addition, the patients were told that they might experience flashbacks and panic attacks during both lactate and isoproterenol infusions, but only two of the seven had flashbacks during isoproterenol in spite of similar effects of the two infusions on heart rate, minute ventilation, and other physiological measures. The content of the flashbacks was also unexpected. Both patients and staff expected the flashbacks to be about combat and that the patients would report the recurrence of a previous flashback. Instead, half of the flashbacks were related to the laboratory setting and procedures, and most had not occurred before. Finally, most of the patients stated that the experimental procedure reduced rather than intensified the effects of the infusions.

Our subjects had a history of posttraumatic stress disorder, flashbacks, and panic attacks. There may be fewer flashbacks in a larger sample of subjects with these characteristics, in subjects with posttraumatic stress disorder who do not have flashbacks, in subjects with flashbacks but no panic attacks, and in subjects with flashbacks but not posttraumatic stress disorder. There may also be more flashbacks during isoproterenol infusions in patients with posttraumatic stress disorder if the dose administered is 20 ng/kg per minute instead of 1 µg per minute (unpublished observations of Pohl et al.).

We have used a similar procedure in more than 100 patients with panic disorder and 40 control subjects without observing a flashback, and lactate infusions have been administered to more than 300 patier ts with panic disorder and control subjects by other investigators with no reports of flashbacks. We do not know if this procedure will precipitate flashbacks or dissociative episodes in individuals with other physical or psychiatric illnesses. However, with further development, it may be possible to use the procedure to reliably produce flashbacks and other dissociative phenomena and to study the relationship between flashbacks and panic anxiety.

- Burnstein A: Posttraumatic flashbacks, dream disturbances and mental imagery. J Clin Psychiatry 1985; 46:374–378
- 2. Mellman TA, Davis GC: Combat-related flashbacks in post-traumatic stress disorder: phenomenology and similarity to panic attacks. J Clin Psychiatry 1985; 46:379–382
- Rainey JM, Frohman C, Freedman R, et al: Specificity of lactate infusion as a model of anxiety. Psychopharmacol Bull 1984; 20: 45-49
- 4. Rainey JM, Ettedgui E, Pohl R, et al: The beta receptor: isoproterenol anxiety states. Psychopathology 1984: 17(suppl 3)-40_51
- Holloway HC, Ursano RJ: The Vietnam veteran: memory, social context, and metaphor. Psychiatry 1984; 47:103–108

The Hypothalamic-Pituitary-Adrenal System in Panic Disorder

Susanna Goldstein, M.D., Uriel Halbreich, M.D., Gregory Asnis, M.D., Jean Endicott, Ph.D., and Jose Alvir, Dr.Ph.

The authors evaluated 24 outpatients with panic disorder by means of the afternoon continuous test for cortisol and the 1-mg dexamethasone suppression test (DST) and compared the results with those of 38 outpatients with major depressive disorder and 61 healthy control subjects. The mean basal cortisol level of the patients with panic disorder was significantly higher than that of the normal control subjects but almost identical to that of the depressed patients. Only three of the patients with panic disorder had abnormal DST results. These results indicate that patients with panic disorder have an abnormality of at least one function of the hypothalamic-pituitary-adrenal system which overlaps the abnormality in major depressive disorder.

(Am J Psychiatry 1987; 144:1320-1323)

The relationship between panic disorder and major depressive disorder is an intriguing conceptual and diagnostic issue. It has been shown that major depressive disorder aggregates in relatives of patients with both major depressive disorder and panic disorder (1), the morbidity risk for alcoholism in families of patients with depression and those with panic disorder is higher than that in families of normal control subjects (2), and both disorders have comparable sex distributions (2). Tricyclic antidepressants and monoamine oxidase inhibitors (MAOIs) have been shown to

be effective in the treatment of both disorders (3–5). There are phenomenological similarities between the two conditions, and symptoms of one often complicate the course of the other (6). Major depression has been reported (7) to occur in the lifetime history of two-thirds of patients with agoraphobia-panic disorder. Other studies have found that patients with panic disorder had a 53% risk of secondary depression (8) and that panic disorder with secondary depression was remarkably similar clinically to depression with secondary panic attacks (9). These associations led some investigators to postulate that panic disorder is biologically related to major depressive disorder or that both are variants of affective disorders which may share some common pathophysiology.

The hypothalamic-pituitary-adrenal (HPA) system has received a great deal of attention in recent years as a potential biological focus for studies of mental disorders and eventually for refining psychiatric diagnosis. Abnormalities of the HPA system have been shown in some patients with major depression, endogenous subtype. Abnormalities have been demonstrated by cortisol nonsuppression following administration of dexamethasone (10, 11). They have also been demonstrated by an increase in basal plasma levels of cortisol as measured over 24 hours (12) or after a short 3-hour procedure, the afternoon continuous test for cortisol, which represents the mean 24-hour plasma cortisol level (13, 14). If major depressive disorder and panic disorder were biologically associated, one would expect the incidence of the HPA abnormalities to be similar in both syndromes. However, several studies explored dexamethasone suppression test (DST) results in panic disorder with and without agoraphobia and reported that they were "normal" (15-21). Only one study (22) reported an incidence of abnormal DST results in patients with panic disorder equivalent to that seen in a group of depressed outpatients. On the basis of these responses, it is usually assumed that there is no abnormality of the HPA system in panic disorder. Other functions of the HPA system were less explored in these patients. For this study, therefore, we evaluated HPA function in patients with panic disorder and compared it with that of depressed patients and normal control subjects.

Received Feb. 18, 1986; revised Oct. 14, 1986; accepted April 3, 1987. From the State University of New York, Buffalo; the New York State Psychiatric Institute, New York; Albert Einstein College of Medicine and Montefiore Medical Center, New York; and Long Island Jewish Medical Center, Hillside Hospital, Glen Oaks, N.Y. Address reprint requests to Dr. Goldstein, Department of Psychiatry, St. Luke's-Roosevelt Hospital, Amsterdam Ave. and 114th St., New York, NY 10025.

Supported in part by NIMH grants RO1-37111 and MH-30906, the New York State Department of Mental Hygiene, the Ritter Foundation, and the Upjohn Company.

The authors thank John Nee, Ph.D., for statistical support, Frank Gasparini, Ph.D., for laboratory analysis, and Juliet Lesser and Kathy Bacon for data collection.

Copyright © 1987 American Psychiatric Association.

METHOD

Twenty-four patients (17 women and seven men), ranging in age from 21 to 58 years (mean ± SD = 38 ± 6 years) were studied as part of an evaluation of their eligibility for a drug study of panic disorder with or without agoraphobia. These patients were compared with 38 outpatients with major depressive disorder, endogenous subtype, ranging in age from 20 to 76 years (mean \pm SD=41 \pm 17), and 61 normal subjects, ranging in age from 24 to 74 years (mean \pm SD=46 \pm 15). The sex distributions in all three groups were comparable. All subjects gave written and verbal informed consent and underwent the same clinical evaluation. Subjects with major physical illnesses or distinctly abnormal laboratory values, those taking medication that might affect HPA activity, and those who were pregnant, lactating, or using hormonal contraception were excluded from study, as were subjects with recent weight loss and alcohol use or withdrawal (10). All subjects had a psychiatric diagnostic evaluation that used the Schedule for Affective Disorders and Schizophrenia (SADS) (23). The normal subjects were confirmed as being "not currently mentally ill" for at least the previous 2 years. Major depressive disorder was diagnosed according to Research Diagnostic Criteria (RDC) (24). The mean±SD Hamilton Rating Scale for Depression (17 items) score was 17.9±9.1. All the patients in this group also qualified for the diagnosis of major depression according to DSM-III. The patients with panic disorder were evaluated by using the SADS and the Structured Clinical Interview for DSM-III (25) and diagnosed by DSM-III criteria. Patients with phobic avoidance (N=20) were accepted provided they fulfilled the criterion of having had three panic attacks in the 3 weeks immediately before the study. Panic patients who were also depressed (N=8) were accepted if their depression was secondary to the panic disorder, the depressed mood was related to the panic or phobic symptoms, and there was no melancholia. The mean Hamilton depression score of the patients with panic disorder was 12 ± 6.5 . Patients with psychotic symptoms, a history consistent with bipolar disorder, recent alcoholism, or a previous lifetime diagnosis of major depressive disorder were excluded.

For the afternoon continuous test for cortisol, a scalp vein needle was secured in an arm vein and attached to a (Cormed) continuous blood drawing pump through a nonthrombogenic catheter. A continuous blood sample of 7 ml/hour over 3 hours (1:00 to 4:00 p.m.) was withdrawn into a heparinized tube. For the DST, at 11:00 p.m. the subjects ingested 1 mg of dexamethasone. Blood samples for cortisol determination were drawn at 4:00 p.m. the next day. Procedures for the afternoon continuous test and the DST are described in detail elsewhere (10, 13). Samples were assayed for cortisol in duplicate by the competitive protein binding method. Intraassay and interassay coefficients of variation were 2.8% and 9%, respec-

tively. Nonsuppression on the DST was defined as a cortisol level higher than 5 µg/dl at 4:00 p.m. An abnormal afternoon continuous test result was defined as a cortisol level higher than 10.5 µg/dl (more than two standard deviations above the normal mean) (13).

RESULTS

The afternoon continuous test for cortisol values of the patients with panic disorder ranged from 4.5 to 15.7 μ g/dl (mean \pm SD= 8.8 ± 2.5 μ g/dl), which was almost identical to the mean cortisol level of the outpatients with major depressive disorder (8.7±3.8) µg/dl) but significantly higher than that of the rormal control subjects $(6.6\pm2.0 \mu g/dl)$ (F=12.04, df=1, 83, p=.0008). This difference remained significant when controlled for age (F=9.86, df=1, 83, p=.002) Eight (33.3%) of the 24 patients with panic disorder had basal cortisol levels higher than two standard deviations above the normal mean, compared with four (6.6%) of the 61 normal control subjects (χ^2 - 5.31, df=1, p=.021) and 14 (36.8%) of the 38 patients with major depressive disorder (χ^2 =0.000, df=1, p=.993). The distribution curve of the basal cortisol levels of patients with panic disorder was almost identical to that of the patients with major depressive d sorder (Kolmogoroff-Smirnoff Z=0.917, p=.37) but significantly different from that of the normal control subjects (Kolmogoroff-Smirnoff Z=1.993, p=.001...

The postdexamethasone cortisol levels of the patients with panic disorder ranged from 0.6 to 10.3 µg/ dl (mean \pm SD=2.7 \pm 2.3 µg/dl), which was not significantly higher (F=1.9, df=1, 81, p=.088) than that of the normal subjects (1.9±1.7 µg/dl) and almost identical to the mean postdexamethasone cortisol level of the outpatients with major depressive disorder (2.6± 2.6 µg/dl). The means of these two groups also did not differ when controlled for age. Three (12.5%) of the 24 patients with panic disorder were nonsuppressors, compared with three (5.1%) of the 59 normal subjects whose DST results were available and five (13.2%) of the 38 depressed outpatients. These differences were not significant ($\chi^2=1.15$, df=1, p=.283). The distribution curves of the postdexamethasone cortisol levels of patients with panic disorder and normal control subjects were not statistically different (Kolmegoroff-Smirnoff Z=1.664, p=.133); nor were the distribution curves of the patients with panic disorder and major depressive disorder (Kolmogoroff-Smirnoff Z= 0.791, p = .560).

Thirteen (56.5%) of the 23 patients witl panic disorder for whom data were available had first-degree relatives with agoraphobia, alcoholism, or major depressive disorder. Their mean \pm SD 1:00–4:60 p.m. cortisol level (8.5 \pm 2.27 µg/dl) did not differ from that of the 10 patients without a positive family history (9.1 \pm 3.0 µg/dl). Eight (33.3%) of the 24 patients with panic disorder also qualified for the diagnosis of major

depressive disorder secondary to the panic disorder. The mean 1:00-4:00 p.m. cortisol level of these patientswas 8.4 ± 2.64 µg/dl, not significantly different from that of the patients without depression $(9.0\pm2.5$ µg/dl). There was no relationship between the occurrence of agoraphobia, alcoholism, and major depressive disorder in the relatives and the presence of secondary major depression and nonsuppression on the DST.

DISCUSSION

In this study we explored two functions of the HPA system: the basal plasma level of cortisol and cortisol suppression after dexamethasone administration. We found that although the DST results of most of the outpatients with panic disorder were normal, their basal levels of cortisol were higher than normal and resembled those of outpatients with major depressive disorder, endogenous subtype. Our results confirm previous reports that patients with panic disorder have a low rate of postdexamethasone nonsuppression, which is also not very different from outpatients with major depressive disorder, who have been shown to have generally lower nonsuppression rates than inpatients (26–28). Therefore, the assumption that the low rate of DST nonsuppression in panic disorder supports a distinct pathophysiology of panic disorder and depression is not tenable.

Methodologically, the present study differs from previous ones. 1) We did not limit our study to the DST because it has been previously shown in normal subjects and patients with major depressive disorder (9, 12, 29-33) that there is only a partial overlap between DST results (which reflect an intervention in the delayed feedback mechanism in the HPA system) and basal levels of cortisol (a possible set-point of the system?). 2) A group of outpatients with major depressive disorder and a group of normal subjects were tested by the same procedure and assay. 3) All of the patients with panic disorder included in our study were actively symptomatic for at least 3 weeks before the tests and had been carefully screened for other psychiatric disorders, particularly primary major depressive disorder. 4) All subjects were screened by the same rigorous and standardized exclusion criteria for hidden clinical variables that might result in HPA abnormalities.

The observed rate of 12.5% of nonsuppression of cortisol in response to dexamethasone among patients with panic disorder is consistent with earlier reports (15–21). Nevertheless, an examination of our results as well as those of previous studies reveals that although most patients with panic disorder have postdexamethasone levels below the cutoff point of 5 μ g/dl, the mean levels are higher than those of the normal subjects. This may suggest some abnormality of the HPA system in panic disorder even in this function. The elevated basal levels of cortisol that we found might be ascribed to nonspecific affective

arousal. However, none of our patients experienced a panic attack during the test; in a previous study of phobic patients experiencing severe panic attacks evoked by live exposure ("flooding in vivo") there was no hypersecretion of cortisol (34); and studies of lactate-induced panic attacks showed no significant differences in plasma cortisol level between panic disorder patients and normal control subjects following lactate infusion (35, 36). Our findings of elevated basal cortisol levels in patients with panic disorder are in agreement with two studies that reported elevated afternoon cortisol levels (37) and blunted ACTH responses to corticotropin-releasing hormone in association with elevated basal plasma cortisol levels (38) in panic disorder.

Eight patients with panic disorder were diagnosed as having secondary major depressive disorder. No association between the presence and severity of the secondary depression and the occurrence of abnormal DST results was found. It has been reported (39) that 45% of patients with panic disorder and secondary depression were cortisol nonsuppressors on the DST. Our sample may be "purer" in the sense that we excluded all patients with a lifetime diagnosis of primary major depressive disorder and any symptoms of melancholia. Therefore, the subgroup of patients with "anxious depression" (33) who often present a diagnostic dilemma and may increase the rate of nonsuppression of the sample may not have been represented in our study.

In conclusion, we found that patients with panic disorder did have an abnormality of the HPA system manifested in elevated basal levels of cortisol; the pattern of this abnormality was similar in outpatients with panic disorder and major depressive disorder, and both groups were significantly different from normal control subjects. Therefore, the association between panic disorder and depression cannot be excluded, at least on the basis of differences in the HPA functions.

- Leckman JF, Weissman MM, Merikangas KR, et al: Panic disorder and depression: increased risk of depression, alcoholism, panic and phobic disorders in families of depressed probands with panic disorder. Arch Gen Psychiatry 1983; 40: 1055-1060
- 2. Crowe R, Pauls D, Slyman D, et al: Family study of anxiety neurosis. Arch Gen Psychiatry 1980; 37:77-79
- Sheehan DV, Ballenger J, Jacobson G: The treatment of endogenous anxiety with phobia, hysterical and hypochondriacal symptoms. Arch Gen Psychiatry 1980; 37:51-59
- 4. Quitkin F, Rifkin A, Klein D: Monoamine oxidase inhibitors: a review of antidepressant effectiveness. Arch Gen Psychiatry 1979; 36:749–760
- Zitrin CM, Klein DF, Woerner MG, et al: Treatment of phobias, I: comparison of imipramine hydrochloride and placebo. Arch Gen Psychiatry 1983; 40:125–138
 Schapira K, Roth M, Kerr T, et al: The prognosis of affective
- 6. Schapira K, Roth M, Kerr T, et al: The prognosis of affective disorders: the differentiation of anxiety states from depressive illness. Br J Psychiatry 1972; 121:175–181
- Breier A, Charney DS, Heninger GR: Major depression in patients with agoraphobia and panic disorder. Arch Gen Psychiatry 1984; 41:1129–1135

- 8. Dealy RS, Ishiki DM, Avery DH, et al: Secondary depression in anxiety disorders. Compr Psychiatry 1981; 22:612-618
- VanValkenburg C, Akiskal SH, Puzantian V, et al: Anxious depressions: clinical, family history and naturalistic outcome comparisons with panic and major depressive disorders. J Affective Disord 1984; 6:67-82
- Carroll BJ, Feinberg M, Greden JF: A specific laboratory test for the diagnosis of melancholia: standardization, validation, and clinical utility. Arch Gen Psychiatry 1981; 38:15-22
- Arana GW, Baldessarini RJ, Ornsteen M: The dexamethasone suppression test for diagnosis and prognosis in psychiatry. Arch Gen Psychiatry 1985; 42:1193–1204
- Halbreich U, Asnis GM, Shindledecker R, et al: Cortisol secretion in endogenous depression, I: basal plasma levels. Arch Gen Psychiatry 1985; 42:904–908
- 13. Halbreich U, Asnis GM, Goldstein S, et al: The afternoon cortisol test (ACT): representation of the mean 24 hour plasma levels of cortisol by a single short continuous blood sample. Clin Neuropharmacol (Suppl) 1984; 7:147–148
- Halbreich U, Zumoff B, Kream J, et al: The mean 1-4 pm plasma cortisol concentration as a diagnostic test for hypercortisolism. J Clin Endocrinol Metabol 1982: 54:1261-1264
- tisolism. J Clin Endocrinol Metabol 1982; 54:1261–1264
 15. Curtis GC, Cameron OG, Nesse RM: The dexamethasone suppression test in panic disorder and agoraphobia. Am J Psychiatry 1982; 139:1043–1046
- Lieberman JA, Brenner R, Lesser M, et al: Dexamethasone suppression tests in patients with panic disorder. Am J Psychiatry 1983; 140:917-919
- Sheehan DV, Claycomb JB, Surman OS, et al: Panic attacks and the dexamethasone suppression test. Am J Psychiatry 1983; 140:1063-1064
- Peterson GA, Ballenger JC, Cox DP, et al: The dexamethasone suppression test in agoraphobia. J Clin Psychopharmacol 1985; 5:100-102
- Roy-Byrne PP, Bierer IM, Uhde TW: The dexamethasone suppression test in panic disorder: comparison with normal controls. Biol Psychiatry 1985; 20:1237–1240
- Bridges M, Yeragani VK, Rainey JM, et al: Dexamethasone suppression test in patients with panic attacks. Biol Psychiatry 1986; 21:853–855
- Faludi G, Kasko M, Perenyi A, et al: The dexamethasone suppression test in panic disorder and major depressive episodes. Biol Psychiatry 1986; 21:1008–1014
- Avery DH, Osgood TB, Ishiki DM, et al: The DST in psychiatric outpatients with generalized anxiety disorder, panic disorder, or primary affective disorder. Am J Psychiatry 1985; 142:844

 848
- Endicott J, Spitzer R: A diagnostic interview: the Schedule for Affective Disorders and Schizophrenia. Arch Gen Psychiatry 1978; 25:837–844
- 24. Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria (RDC) for a Selected Group of Functional Disorders, 3rd ed.

- New York, New York Psychiatric Institute, Biometrics Research, 1977
- Spitzer RL, Williams JB: Structured Clinical Interview for DSM-III. New York, New York State Psychiatric Institute, Biometrics Research, 1985
- Amsterdam JD, Winokur A, Caroff SN, et al: The devamethasone suppression test in outpatients with primary affective disorder and healthy control subjects. Am J Psychiatry 1982; 139:287–291
- Pesolow ED, Goldring N, Fieve RR, et al: The dexamethasone suppression test in depressed outpatients and normal control subjects. Am J Psychiatry 1983; 140:245–247
- 28. Winokur A, Amsterdam J, Caroff S, et al: Variability of hormonal responses to a series of neuroendocrine challenges in depressed patients. Am J Psychiatry 1982; 139:39-44
- 29. Halbreich U, Asnis GM, Shindledecker R, et al: Cortisol secretion in endogenous depression, II: time related unctions. Arch Gen Psychiatry 1985; 42:909–914
- 30. Brown WA, Keitner G, Qualls CB, et al: The dexamethasone suppression test and pituitary adrenocortical function. Arch Gen Psychiatry 1985; 42:121–123
- 31. Holsboer F, Gerken A, Steiger A, et al: Mean 1400-1700 plasma cortisol concentration and its relationship to the 1 mg dexamethasone suppression response in depressives and controls. Acta Psychiatr Scand 1984; 69:383-390
- 32. Stokes PE, Stoll PM, Koslow SH, et al: Pretreatment DST and hypothalamic-pituitary-adrenocortical function in depressed patients and comparison groups. Arch Gen Psychiatry 1984; 41:257-267
- Asnis GM, Sachar EG, Halbreich U, et al: Cortisol secretion and dexamethasone response in depression. Am J Psychiatry 1981; 38:1218–1221
- 34. Curtis GC, Nesse R, Buxton M, et al: Anxiety and plasma cortisol at the crest of the circadian cycle: reapprusal of a classical hypothesis. Psychosom Med 1978; 40:368–378
- 35. Appleby IL, Klein DF, Sachar ET, et al: Biochemical indices of lactate induced panic—a preliminary report, in Anxiety: New Research and Changing Concepts. Edited by Klein D1, Rabkin JG. New York, Raven Press, 1981
 36. Liebowitz MR, Gorman TM, Fyer AT, et al: Lactate provoca-
- Liebowitz MR, Gorman TM, Fyer AT, et al: Lactate provocation of panic attacks, II: biochemical and physiological findings. Arch Gen Psychiatry 1985; 42:709–719
- Nesse RM, Cameron OG, Curtis GC, et al: Adrenergic function in patients with panic anxiety. Arch Gen Psychiatry 1984; 41: 771, 776.
- 38. Roy-Byrne PP, Uhde TW, Post RM, et al: The correctropinreleasing hormone stimulation test in patients with panic disorder. Am J Psychiatry 1986; 143:896–899
- 39. Bueno JA, Sabanes F, Gascon J, et al: Dexamethasor e suppression test in patients with panic disorder and secondary depression. Arch Gen Psychiatry 1984; 41:723-724

Cyclic AMP Signal Transduction in Posttraumatic Stress Disorder

Bernard Lerer, M.D., Richard P. Ebstein, Ph.D., Miguel Shestatsky, M.D., Zecharia Shemesh, M.D., and David Greenberg, M.D.

Cyclic adenosine 3',5'-monophosphate (cAMP) signal transduction was examined in lymphocytes and platelets obtained from patients with posttraumatic stress disorder. Intact lymphocytes from the posttraumatic patients (N=10) showed significantly lower basal, isoproterenol-, and forskolin-stimulated cAMP levels than those from 10 healthy control subjects. In platelet membrane preparations, basal, forskolin-, aluminum chloride plus sodium fluoride-, and prostaglandin E_1 -stimulated adenylate cyclase activity levels were all significantly lower in the posttraumatic group than in the control group. The authors discuss the potential role of their findings as a biological marker for posttraumatic stress disorder.

(Am J Psychiatry 1987; 144:1324–1327)

osttraumatic stress disorder, as defined by DSM-III, encompasses a characteristic set of symptoms that follow exposure to a psychologically traumatic event which is generally outside the range of usual human experience. Symptoms involving reexperiencing the traumatic event and avoidance of situations reminiscent of it are specifically related to posttraumatic stress. Others, such as numbing of responsiveness to or reduced involvement with the external world and the variety of autonomic, dysphoric, and cognitive symptoms included in the DSM-III criteria, are shared with affective and anxiety syndromes. Definitive evidence that posttraumatic stress disorder can, in fact, be empirically discriminated as a distinct clinical entity is not yet available. Furthermore, a number of reports have suggested that patients with posttraumatic stress disorder may respond to treatment with agents classically effective in affective disorders, such as tricyclic antidepressants (1, 2) and monoamine oxidase inhibitors (3). The possibility that biological markers associated with major affective disorder may also be de-

Recent extensions of the classical catecholamine hypothesis of affective disorders (4) have focused on possible abnormalities of β-adrenergic receptor-mediated cyclic adenosine 3',5'-monophosphate (cAMP) responsiveness in depressed patients (5-7). Because of the inaccessibility of brain tissue, \u03b3-adrenergic receptors on peripheral blood cells have been used as convenient markers of adrenergic receptor function. Confirming previous reports (5, 6), Mann et al. (7) found that drug-free depressed patients had lower isoproterenol-stimulated cAMP levels in intact lymphocytes than did healthy control subjects. The receptor-associated adenylate cyclase complex is now known to consist of three principal components—the receptor to which the hormone or neurotransmitter binds, a guanyl nucleotide binding unit, and a catalytic unit (8). The availability of compounds that differentially stimulate these components has made the process of signal transduction distal to the receptor accessible to in vitro investigation. Stimulation with isoproterenol and prostaglandin E₁ (PGE₁) yields information as to β-adrenergic receptor-mediated and PGE₁ receptormediated responsiveness, respectively. Aluminum chloride (in the presence of sodium fluoride) (AlCl₃/NaF) acts on the guanyl nucleotide binding uint (9), and the diterpene compound forskolin interacts with the catalytic unit (10). In the present study, we investigated cAMP signal transduction in intact lymphocytes and in platelet membranes from patients with posttraumatic stress disorder.

METHOD

Twelve patients gave informed consent to participate in this study. All were outpatients at the Jerusalem Mental Health Center Community Clinic. Their mean±SD age was 35.9±10.1 years (range, 24–57 years). Using a semistructured interview, two of the three psychiatrists participating in the study (B.L., M.S., or D.G.) jointly made the diagnosis of posttraumatic stress disorder in accordance with DSM-III criteria. Of the 12 patients, five were military veterans in whom the precipitating traumatic event was combat related, three had been victims of terrorist activity, and

monstrable in patients with posttraumatic stress disorder therefore merits exploration.

Received July 14, 1986; revised Nov. 13, 1986; accepted March 17, 1987. From the Jerusalem Mental Health Center-Ezrath Nashim. Address reprint requests to Dr. Lerer, Director of Research, Jerusalem Mental Health Center-Ezrath Nashim, P.O.B. 140, Jerusalem Jerael.

Copyright © 1987 American Psychiatric Association.

four had been involved in motor accidents. None had suffered significant physical injury. A mean±SD of 5.4±4.2 years (range=1-12 years) had elapsed since the trauma. The presence or absence of other DSM-III diagnostic categories was also assessed: five patients fulfilled other DSM-III criteria—two for major depressive disorder, one for dysthymic disorder, and two for generalized anxiety disorder. None of the 12 patients had any history of alcohol or other substance abuse.

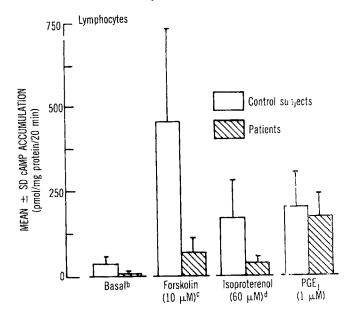
Two age- and sex-matched normal control groups with no history of psychiatric illness were obtained from the hospital staff. One control group (mean ±SD $age=41.00\pm13.79$ years, range=22-60 years; N=10) was used for comparing cAMP accumulation in intact lymphocytes and the second (mean ± SD age = 37.20 ± 12.46 years, range=22-60 years; N=10) for comparing adenylate cyclase activity in platelet membranes. The patients and the control subjects were free of psychotropic and other medication for at least 4 weeks.

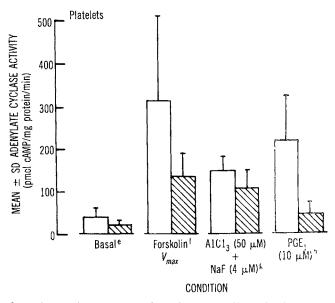
Lymphocyte and platelet preparations were obtained from a 50-cc blood sample, which was drawn into a syringe containing preservative-free sodium heparin. Both preparations were isolated by means of a modified (11, 12) method of Boyum (13). Assays were performed in the Jerusalem Mental Health Center Research Laboratory by a researcher (R.P.E.) who was blind to the clinical status of each individual. cAMP accumulation in response to stimulation with isoproterenol (10 µM), forskolin (60 µM), and PGE₁ (1 μM) was determined in the lymphocyte preparations as previously described (11). Platelet membranes were stored at -100° C until assayed by the Salomon et al. (12) procedure. Adenylate cyclase activity in response to forskolin (10-500 μM), aluminum chloride (50 μ M) plus sodium fluoride (4 μ M), and PGE₁ (10 μM) was determined as previously described (14, 15). The V_{max} for forskolin-stimulated adenylate cyclase activity was determined by Lineweaver and Burk plots and the best fit line calculated by linear regression analysis. Intergroup differences were compared by Student's t tests (two-tailed).

RESULTS

Data from both lymphocytes and platelets were obtained for eight of the 12 patients in the study. For technical reasons, lymphocyte data alone were available for two patients and platelet data alone for two others. Each sample was therefore made up of 10 patients with posttraumatic stress disorder who were compared to the appropriate control groups. Figure 1 shows the values obtained for basal, forskolin-, isoproterenol-, and PGE₁-stimulated cAMP accumulation in intact lymphocytes from the patient and control groups. Significantly lower basal cAMP levels and cAMP responsiveness to isoproterenol and forskolin stimulation (after subtraction of basal values) were found in the patient group than in the control group;

FIGURE 1. Basal and Stimulated Levels of cAMP Accumulation in Intact Lymphocytes and Adenylate Cyclase Activity ir Platelet Membranes From 10 Patients With Posttraumatic Stress Disorder and 10 Normal Control Subjects





^aStimulated values given are after subtraction of basal levels.

^bt=5.20, df=18, p<.001.

ct=4.30, df=18, p<.001.

 $^{d}t=3.89$, df=18, p<.001.

ct=2.95, df=18, p<.01.

ft=2.77, df=18, p<.01. gt=2.17, df=18, p<.05.

ht=3.73, df=18, p<.001.

no difference in PGE₁-stimulated cAMP accumulation was observed between the two groups. Figure 1 also shows the values for basal, forskolin-, AlCl₃/NaF-, and PGE₁-stimulated adenylate cyclase activity in platelet membranes; all four values were significantly lower for the patient group than the control group. Even when the five patients fulfilling criteria for concomitant DSM-III diagnoses were excluded from the data analysis, all the differences remained statistically significant for the lymphocyte (seven patients versus 10 control subjects) and the platelet (five patients versus 10 control subjects) preparations.

DISCUSSION

These preliminary results suggest that drug-free patients with a DSM-III diagnosis of posttraumatic stress disorder are characterized by abnormally low cAMP signal transduction in intact lymphocytes and in platelet membrane preparations. Previous studies conducted in drug-free depressed patients have shown lower than normal β -adrenergic receptor-mediated cAMP accumulations in intact lymphocytes (5–7). This finding was not associated with a low density or affinity of β -adrenergic receptors, suggesting a functional loss of responsiveness without alteration in receptor number (7). Recent data from our laboratory have confirmed the finding of less isoproterenol-stimulated cAMP accumulation in intact lymphocytes from depressed patients than from normal individuals (16).

Although the small sample size mandates caution in interpreting the results, our findings suggest a receptormediated functional deficit in patients with posttraumatic stress disorder similar to that found in depressed patients. The significantly lower forskolin-stimulated activity in patients than in control subjects, demonstrable in lymphocytes and in platelets, indicates that this lower responsiveness extends distal to the receptor and involves the catalytic unit of the enzyme (10). The posttraumatic patients showed, in addition, less response to AlCl₃/NaF stimulation, which acts on the nucleotide binding protein, in their platelet membranes (9) than did the control subjects. The results obtained with PGE₁ stimulation were different in the lymphocyte and platelet preparations: whereas no difference was observed in intact lymphocytes, PGE₁-stimulated activity in platelets was significantly lower in the posttraumatic stress disorder group than in the normal control group. This paradoxical result may be related to the marked differences in the half-life of these two blood elements. The half-life of platelets is several days, whereas lymphocytes may survive for months to years in the peripheral circulation; therefore, response to hormonal or other stimuli may markedly differ between platelets and lymphocytes even for the same receptor.

These results raise the possibility that abnormally low cAMP signal transduction may be a biological marker for posttraumatic stress disorder. The only other biological characteristic thus far associated with posttraumatic stress disorder is low platelet monoamine oxidase activity, reported by Davidson et al. (17); this finding was dependent on a history of alcohol abuse and did not significantly distinguish

control subjects from posttraumatic stress disorder patients without such a history. Our results also suggest a biological link between posttraumatic stress disorder and affective illness, a possibility supported by similarities in symptoms, by a previously reported abnormally high prevalence of familial psychopathology (alcoholism, depression, and anxiety) in relatives of posttraumatic patients (18), and by the reported efficacy of tricyclic antidepressants (1, 2) and monoamine oxidase inhibitors (3) in alleviating posttraumatic symptoms. In addition, our findings were not dependent on a concomitant diagnosis of depressive or anxiety states and were demonstrable even when subjects with such concomitant diagnoses were excluded from the sample.

It is as yet unclear whether the cAMP transduction abnormalities observed in depressed patients (5–7, 16) are a trait characteristic or a phenomenon related to the depressed state. Because of the small number of subjects and the possibly heterogeneous nature of posttraumatic stress disorder, our findings must be regarded as preliminary. If, however, they are replicated in a larger sample of patients with posttraumatic stress disorder, this issue will be of considerable importance in determining whether patients with affective illness and those with posttraumatic stress disorder share a common biological predisposition.

- 1. Burstein A: The treatment of post-traumatic stress disorder with imipramine. Psychosomatics 1983; 25:683-687
- Bleich A, Siegel B, Garb R, et al: Post-traumatic stress disorder following combat exposure: clinical features and psychopharmacological treatment. Br J Psychiatry 1986; 149:365-369
- Hogben GL, Cornfield RB: Treatment of traumatic war neurosis with phenelzine. Arch Gen Psychiatry 1981; 38:440

 –445
- Schildkraut JJ: The catecholamine hypothesis of affective disorders: a review of supporting evidence. Am J Psychiatry 1965; 122:509–522
- Extein I, Tallman J, Smith CC, et al: Changes in lymphocyte beta-adrenergic receptors in depression and mania. Psychiatry Res 1979; 1:191–197
- Pandey GN, Dysken MW, Garver DL, et al: Beta-adrenergic receptor function in affective illness. Am J Psychiatry 1979; 136:675-678
- Mann JJ, Brown RP, Halper JP, et al: Reduced sensitivity of lymphocyte beta-adrenergic receptors in patients with endogenous depression and psychomotor agitation. N Engl J Med 1985; 313:715-720
- Rodbell M: The role of hormone receptors and GTP-regulatory proteins in membrane transduction. Nature 1980; 284:17–22
- Šternweis PC, Gilman AG: Aluminum: a requirement for activation of the regulatory component of adenylate cyclase by fluoride. Proc Natl Acad Sci USA 1982; 79:4888–4891
- Seamon KB, Padgett W, Daly JW: Forskolin: unique diterpene activator of adenylate cyclase in membranes and in intact cells. Proc Natl Acad Sci USA 1981; 78:3363–3367
- Stessman J, Mintzer J, Lipshitz I, et al: Heritability of forskolinand hormone-stimulated adenylate cyclase activity in human lymphocytes. J Cyclic Nucleotide Protein Phosphor Res 1985; 10:317–326
- Salomon Y, Londos C, Rodbell M: A highly sensitive adenylate cyclase assay. Anal Biochem 1974; 58:541–548
- Boyum A: Separation of white blood cells. Nature 1964; 204: 793-794

- 14. Ebstein RP, Oppenheim G, Zlotogorski Z, et al: Age related decline in aluminum-activated human platelet adenylate cyclase: post-receptor changes in cyclic AMP second messenger signal amplification in normal aging and dementia of the Alzheimer type. Life Sci 1986; 39:1167–1175
- 15. Ebstein RP, Moscovich DG, Zeevi S, et al: The effect of lithium in vitro and following chronic treatment on human platelet adenylate cyclase activity: post-receptor modification of second messenger signal amplification. Psychiatry Res (in press)
- Ebstein RP, Lerer B, Shapira B, et al: Cyclic AMP second messenger signal amplification in depression. Br J Psychiatry (in press)
- Davidson J, Lipper S, Kilts CD, et al: Platelet MAO activity in posttraumatic stress disorder. Am J Psychiatry 1985; 142: 1341-1343
- Davidson J, Swartz M, Storck M, et al: A diagnostic and family study of posttraumatic stress disorder. Am J Psychiatry 1983; 142:90-93

Idiopathic Cardiomyopathy and Panic Disorder: Clinical Association in Cardiac Transplant Candidates

Jeffrey P. Kahn, M.D., Ronald E. Drusin, M.D., and Donald F. Klein, M.D.

Patients under evaluation for cardiac transplant surgery were seen for routine psychiatric diagnosis and treatment. Of 35 patients with idiopathic cardiomyopathy, 83% (N=29) had definite or probable panic disorder. Of 25 patients with postinfarction cardiac failure, rheumatic heart disease, or congenital heart disease, only 16% (N=4) had definite or probable panic disorder. The authors suggest that autonomic mechanisms may underlie the association of cardiomyopathy and panic disorder and that increased cardiac sympathetic tone or circulating catecholamines may cause myocarditis and cardiomyopathy.

(Am J Psychiatry 1987; 144:1327–1330)

I diopathic cardiomyopathy is a syndrome of progressive myocardial dysfunction. It often occurs in young adults and may be the most common indication for cardiac transplantation (1). Little is known about its pathogenesis. Some authors have suggested that idiopathic cardiomyopathy is caused by repeated episodes of myocarditis, resulting from viral or autoimmune processes (2, 3). Patients with pheochromocy-

toma can have cardiac pathology similar to idiopathic cardiomyopathy (4), suggesting catecholaminergic or autonomic etiologies as well.

According to DSM-III, panic disorder is a syndrome of recurrent episodes of paroxysmal panic anxiety, associated with symptoms of autonomic arousal. Coryell et al. (5) have reported an increased frequency of cardiovascular death in patients with panic disorder. Their prospective follow-up study examined the death certificates of patients with anxiety disorders and found a variety of terminal cardiovascular events (6). Routine psychiatric treatment of cardiac transplant candidates has offered an opportunity to assess the prevalence of panic disorder in idiopathic cardiomyopathy and other end-stage cardiac diseases.

METHOD

Adult candidates for cardiac transplantation were referred because of progressive, life-threatening cardiac disease and were prescreened to identify patients likely to be appropriate for transplantation. The 60 patients evaluated preoperatively for cardiac transplantation included 50 men and 10 women (average age=40.3 years). Excluded from the study were three patients with idiopathic cardiomyopathy and suggestive but indeterminate histories of panic disorder. Two of them had declined to detail prior psychiatric treatment, and one had been maintained on a regimen of imipramine as an antiarrhythmic. The 60 patients selected for the study then underwent inpatient evaluation at the Columbia-Presbyterian Medical Center.

Supported in part by NIMH grant MH-30906. Copyright © 1987 American Psychiatric Association.

Received July 30, 1986; revised Feb. 13, 1987; accepted April 3, 1987. From the Departments of Psychiatry and Medicine, College of Physicians and Surgeons, Columbia University, New York. Address reprint requests to Dr. Kahn, New York State Psychiatric Institute, Box 87, 722 West 168th St., New York, NY 10032.

Preoperative psychiatric consultation for treatment and prophylaxis of intercurrent psychiatric illness was generally performed during this hospital stay. The diagnostic portion of the consultation was a semistructured clinical interview conducted with consecutive patients by a single psychiatrist (J.P.K.), who was not always blind to cardiac diagnosis. Patients were reassured that they were not being screened for psychiatric contraindications to cardiac transplantation.

Diagnosis of panic disorder, made by DSM-III criteria, required episodes of abrupt onset of anxiety that were associated with at least four related symptoms and occurred at least three times in 3 weeks. History was elicited by questions about paroxysmal symptoms such as anxiety, fears, atypical chest pain, palpitations, tachycardia, nonexertional dyspnea, and nocturnal dyspnea (insomnia). Patients who had panic symptoms but who denied current anxiety were asked if initial panic anxiety had diminished over time. Panic that had occurred during acutely life-threatening events was discounted.

Since panic disorder includes many "pseudocardiac" symptoms, care was taken to exclude symptoms that were possibly caused by the patient's cardiac illness. Episodes were discounted if they were exertional, positional, or exclusively associated with known angina, congestive heart failure, or arrhythmia. Patients were also asked to differentiate panic symptoms from cardiac symptoms and whether panic attacks had been called "anxiety" or "noncardiac" by their cardiologists.

A diagnosis of probable panic disorder was made when the patient's history was strongly suggestive but failed to meet *DSM-III* criteria. These patients described such paroxysmal feelings as "restlessness" and "aggravation" rather than anxiety, had an unknown frequency of panic attacks, had only two or three definite associated symptoms, and had well-described phobic symptoms and poorly defined anxiety.

The chief transplant cardiologist (R.E.D.) gave patients one of three cardiac diagnoses on the basis of clinical history and diagnostic studies. A diagnosis of idiopathic cardiomyopathy was given to patients with a dilated or hypertrophic left ventricle in the absence of likely etiology (prior myocardial infarction, rheumatic heart disease, or congenital heart disease) (7). Patients with this diagnosis could have associated coronary artery disease or subsequent myocardial infarction (7). A diagnosis of postinfarction cardiac failure was assigned to patients with a history of myocardial infarction and subsequent severe left ventricular dysfunction. These patients were not known to have had cardiomegaly or cardiomyopathy before their first infarction. The final group of patients had cardiomyopathies related to rheumatic or congenital heart disease.

RESULTS

Idiopathic cardiomyopathy was diagnosed in 35 patients (average age=38.2 years). Twenty-five

TABLE 1. Diagnosis of Panic Disorder and Cardiac Disease in 60 Cardiac Transplant Candidates

	Panic Disorder						
Cardiac Disease	Definite (N=19)	Probable (N=14)	Absent (N=27)				
Idiopathic cardiomyopathy (N=35)	18	11	6				
Postinfarction cardiac failure (N=18)	1	3	14				
Rheumatic or congenital disease (N=7)	0	0	7				

(71.4%) were men. Nine (25.7%) reported histories of alcoholism or binge drinking. Two (5.7%) had histories of subsequent myocardial infarction, two (5.7%) had suffered embolic strokes, and three (8.6%) had histories of significant hypertension. Five (14.3%) had histories of mitral regurgitation; of these, two (5.7%) had previously undergone valve replacement. Virtually all patients had dilated cardiomyopathies. Typical findings on myocardial biopsy included interstitial fibrosis, myofibrillar hypertrophy, and myocarditis.

Eighteen (51%) of the patients with idiopathic cardiomyopathy met *DSM-III* criteria for panic disorder (table 1). Thirty-one percent of the patients had probable panic disorder. Of these, three reported paroxysmal "restlessness," "uncomfortableness," and "aggravation" rather than anxiety; four reported only two or three associated symptoms; two had panic attacks of uncertain frequency; and two had multiple phobias with severe anxiety.

Ten patients with idiopathic cardiomyopathy and panic disorder (one patient had a probable diagnosis) were treated with alprazolam (a triazolobenzodiazepine effective with panic disorder) (8). All showed a rapid, and usually complete, response. The required dose was sometimes as little as 0.25 mg t.i.d., lower than that typically needed for healthy patients with panic disorder. Other benzodiazepines, such as diazepam and flurazepam, had usually been ineffective with insomnia and anxiety.

Myocardial infarction with consequent left ventricular failure was diagnosed in 18 male patients (average age=47.1 years). Five (27.8%) reported histories of alcoholism or binge drinking. One patient each (5.6%) had a history of hypertension, adult-onset diabetes mellitus, stroke, and mitral regurgitation. Seven patients (38.9%) had undergone coronary artery bypass surgery.

One patient (5.6%) with postinfarction cardiac failure had a history of panic disorder, which had been in remission for 1 year. Three patients (16.7%) had probable histories of panic disorder. One of them described "psychological" attacks without anxiety, one had phobias and panic attacks with only three symptoms, and one had an unknown frequency of attacks.

Rheumatic or congenital heart disease was diagnosed in seven male patients (average age=33.4 years).

Two (28.6%) had cardiomyopathies secondary to atrial septal defects, one (14.3%) to ventricular septal defect, and one to repaired tetralogy of Fallot. Three patients (42.9%) had rheumatic valvular disease. All three had had prior valve replacements, and one had a subsequent myocardial infarction. None had a history of panic disorder or alcoholism.

We compared the prevalence of the three categories of panic disorder (definite, probable, and absent) in the three groups of patients by a nonparametric, two-tailed Mann-Whitney U test. There was a significant difference between the patients with idiopathic cardiomyopathy and those with postinfarction cardiac failure (U=530.5, z=4.05, p<.001) and those with rheumatic or congenital heart disease (U=221.5, z=3.34, p<.01). The difference between patients with postinfarction cardiac failure and those with rheumatic or congenital heart disease was not significant (U=77.0, z=0.85, n.s.).

In a further analysis we compared the groups for the prevalence of definite panic disorder only. The patients with idiopathic cardiomyopathy had a significantly higher rate than the other two groups ($\chi^2=15.17$, df=2, p<.001).

DISCUSSION

These clinical observations suggest that panic disorder is common in cardiac transplant candidates with end-stage idiopathic cardiomyopathy but not in patients with other end-stage cardiac diseases. Several autonomic mechanisms could underlie the association of panic and idiopathic cardiomyopathy.

À panic-related increase in centrally mediated cardiac sympathetic tone is one possible mechanism of idiopathic cardiomyopathy. Panic attacks are associated with a tachyarrhythmia and subjective palpitations (9), and panic disorder may be linked to increased CNS noradrenergic activity (10). One recent report attributed two cases of dilated cardiomyopathy to ectopic atrial tachyarrhythmias (11). Some cardiologists have speculated that myocardial hypertrophy may be caused by autonomically induced small vessel changes. Centrally mediated local effects would be consonant with an absence of a general catecholamine surge in panic attacks.

Panic-related increases in peripheral catecholamines are another possible cause of idiopathic cardiomyopathy. Panic-induced elevations in catecholamine levels have been postulated but are not clearly associated with lactate-induced panic attacks (12, 13). However, indirect evidence for increased peripheral catecholamine activity in panic disorder is provided by the subsensitivity of lymphocyte β-adrenergic receptors to isoproterenol stimulation in vitro (J.J. Mann, K.D. Shear, J.P. Halper, et al., 1985, unpublished data).

Increased catecholamine levels could contribute to cardiomyopathy. Chronic norepinephrine infusion causes myocardial hypertrophy in dogs (14). Experi-

mental myocarditis can be produced in animals by infusion of various catecholamines (15) and even by exposure to stressful stimuli (16). Catecholamine-secreting pheochromocytomas can cause myocarditis and cardiomyopathy in humans (4), and plasma norepinephrine levels are highly predictive of progression of congestive heart failure (17). Myocardial hemorrhage and necrosis have been reported in human homicide victims (18). Chronic or repeated episodes of catecholamine myocarditis could thus lead to progressive cardiomyopathy (19, 20).

There are also mechanisms which would suggest that panic disorder could be caused by end-stage idiopathic cardiomyopathy. Congestive heart failure is associated with elevated peripheral catecholomine levels (17), which could trigger panic attacks. Panic was infrequent in our patients without idiopathic cardiomyopathy, though, and the catecholomine surges of pheochromocytoma do not cause panic attacks (21). Similarly, infusions of isoproterenol can trigger panic attacks, but only rarely in patients without preexisting panic disorder (22). It is possible that congestive heart failure could exacerbate existing panic disorder by raising catecholomine levels.

The prominent pseudocardiac symptoms of panic disorder raise the possibility that those symptoms could be a consequence of cardiac dysfunction. Such symptoms have been described as unexplained clinical features of idiopathic cardiomyopathy (7), but a concurrent association with paroxysmal anxiety has not been recognized. The diagnosis of panic disorder is further supported by the rapid response to alprazolam, an effective antipanic agent (8). Other benzediazepines were not generally effective. Finally, panic was uncommon in the other cardiac patients.

Since panic disorder was uncommon in other cardiac patients, it cannot be understood solely as a psychological reaction to the stress of illness or the threat of death. Patients with idiopathic cardiomyopathy could have developed panic disorder as an interaction between the stress of illness and an underlying predisposition to panic attacks. Alternatively, knowledge of a cardiac illness could have increased awareness of pseudocardiac panic symptoms. Idiopathic cardiomyopathy patients typically recalled panic attacks occurring soon after cardiac disease was diagnosed, but most were uncertain when their panic attacks began.

Uncertainty about the date of onset of panic disorder may have been due to denial of psychiatric symptoms. Many cardiomyopathy patients had stoic personalities and were reluctant to discuss psychiatric symptoms. Their reluctance was heightened by concerns about the transplant evaluation process. Several patients who did present a clearly defined history described panic attacks that predated cardiac symptoms by months or years (23). Their histories were often similar to William Harvey's 1649 description of a man with suppressed rage who died with a massively enlarged heart (24). These patients said that they had

been irritable people who developed panic disorder and then decided to avoid angry behavior.

Finally, alcoholism may be associated with both idiopathic cardiomyopathy (7) and panic disorder, as well as with coronary artery disease. Similarly, mitral valve prolapse may be associated with both idiopathic cardiomyopathy (7) and panic disorder (25) and is one possible explanation for the higher prevalence of mitral regurgitation in our cardiomyopathic patients.

Further studies, with researchers blind to cardiac diagnosis, will be needed to confirm this association. Subsequent studies could also examine the prevalence of cardiomyopathic changes in panic disorder patients and the efficacy of antipanic treatment in the stabilization of idiopathic cardiomyopathy.

- Hassel LA, Fowles RE, Stinson EB: Patients with congestive cardiomyopathy as cardiac transplant recipients: indications for and results of cardiac transplantation and comparison with patients with coronary artery disease. Am J Cardiol 1981; 47: 1205–1209
- Johnson RA, Palacios I: Dilated cardiomyopathies of the adult,
 N Engl J Med 1982; 307:1051–1058
- Johnson RA, Palacios I: Dilated cardiomyopathies of the adult, II. N Engl J Med 1982; 307:1119

 –1126
- Van Vliet PD, Burchell HB, Titus JL: Focal myocarditis associated with pheochromocytoma. N Engl J Med 1966; 274:1102–1108
- Coryell W, Noyes R, Clancy J: Excess mortality in panic disorder: a comparison with primary unipolar depression. Arch Gen Psychiatry 1982; 139:701-703
- Coryell W, Noyes R Jr, House JD: Mortality among outpatients with anxiety disorders. Am J Psychiatry 1986; 143:508–510
- 7. Abelmann WH: Classification and natural history of primary myocardial disease. Prog Cardiovasc Dis 1984; 27:73-94
- Ballenger JC: Psychopharmacology of the anxiety disorders. Psychiatr Clin North Am 1984; 7:757–771
- Freedman RR, Ianni P, Ettedgui E, et al: Ambulatory monitoring of panic disorder. Arch Gen Psychiatry 1985; 42:244–248
- Charney DS, Heninger GR, Breier A: Noradrenergic function in panic anxiety: effects of yohimbine in healthy subjects and patients with agoraphobia and panic disorder. Arch Gen Psychiatry 1984; 40:425–430

- 11. Gillette PC, Smith RT, Garson A, et al: Chronic supraventricular tachycardia: a curable cause of congestive cardiomyopathy. JAMA 1985; 253:391–392
- Cameron OG, Smith CB, Hollingsworth PJ, et al: Platelet α₂-adrenergic receptor binding and plasma catecholamines before and during imipramine treatment in patients with panic anxiety. Arch Gen Psychiatry 1984; 41:1144–1148
- 13. Liebowitz MF, Gorman JM, Fyer AJ, et al: Lactate provocation of panic attacks, II: biochemical and physiological findings. Arch Gen Psychiatry 1985; 42:709–719
- Laks MM, Morady F, Swan HJC: Myocardial hypertrophy produced by chronic infusion of subhypertensive doses of norepinephrine in the dog. Chest 1973; 64:75–78
- Dargie HJ, Goodwin JF: Catecholamines, cardiomyopathies and cardiac function, in Progress in Cardiology, vol 11. Edited by Yu PN, Goodwin JF. Philadelphia, Lea & Febiger, 1982
- Ferrans VJ, Van Vleet JF: Morphological aspects of myocardial lesions associated with stress, in Stress and Heart Disease. Edited by Beamish RE, Singal PK, Dhalla NS. Boston, Martinus Nijhoff, 1985
- 17. Cohn JN, Levine TB, Olivari MT, et al: Plasma norepinephrine as a guide to prognosis in patients with chronic congestive heart failure. N Engl J Med 1984; 311:819–823
- 18. Cebelin MS, Hirsch CS: Human stress cardiomyopathy: myocardial lesions in victims of homicidal assaults without internal injuries. Hum Pathol 1980; 11:123–132
- Dec GW, Palacios IF, Fallon JT, et al: Active myocarditis in the spectrum of acute dilated cardiomyopathies. N Engl J Med 1985; 312:885–890
- Fenoglio JJ, Ursell PC, Kellogg CF, et al: Diagnosis and classification of myocarditis by endomyocardial biopsy. N Engl J Med 1983; 308:12–18
- Starkman MN, Zelnik TC, Nesse RM, et al: Anxiety in patients with pheochromocytomas. Arch Intern Med 1985; 145:248– 252
- 22. Pohl R, Rainey J, Ortiz A, et al: Isoproterenol induced anxiety states. Psychopharmacol Bull 1985; 21:424–427
- 23. Kahn JP, Drusin RE: Panic attacks and idiopathic cardiomyopathy (letter). JAMA 1986; 255:2898
- Harvey W: Medical observations, in Three Hundred Years of Psychiatry: 1536–1860. Edited by Hunter R, MacAlpine I. London, Oxford University Press, 1966
- 25. Gorman JM, Fyer AJ, Gliklich J, et al: Mitral valve prolapse and panic disorders: effects of imipramine, in Anxiety—New Research and Changing Concepts. Edited by Klein DF, Rabkin JG. New York, Raven Press, 1981

Views of Practicing Psychiatrists on the Treatment of Anxiety and Somatoform Disorders

Gavin Andrews, M.D., Dusan Hadzi-Pavlovic, M.Psychol., Helen Christensen, M.Psychol., and Richard Mattick, B.Sc.

Psychiatrists in Australia were asked to recommend treatments for several anxiety and somatoform disorders. In previous surveys they had agreed about the preferred treatments for schizophrenia and major affective disorder but not about treatments for "neurotic depression" or agoraphobia. In the present survey, no treatment was regarded as critical by a majority of psychiatrists for any of the five anxiety and somatoform disorders studied. The authors conclude that because neurotic disorders form an important part of the workload of psychiatrists, consensus procedures should be used to develop guidelines for treatment until the research literature can provide more adequate guidance.

(Am J Psychiatry 1987; 144:1331–1334)

W hat psychiatrists actually do seems to be of abiding interest to both the lay public and the popular media, but there are few systematic data (1, 2). During the past 4 years Australian psychiatrists have participated in a nationwide project—the Quality Assurance Project—to produce outlines of treatment for each major psychiatric condition (3-8). The method was not unlike the National Institute of Mental Health (NIMH) consensus development procedure, but, in addition, the views of practicing psychiatrists were surveyed. In earlier waves of the survey there was agreement about the most appropriate treatment for people with schizophrenia (9) or major depression with melancholia (10) but little agreement about the treatment of patients with agoraphobia (11) or neurotic depression (10). In this report we present data

about psychiatrists' views regarding the treatment of other anxiety and somatoform disorders and compare these with evidence from the literature and with opinions of nominated experts.

METHOD

The 1,154 psychiatrists practicing in Aust-alia in 1981 were identified, a one-in-six random sample was approached to participate in the study, and 187 (92%) agreed. In the fourth year of the study, 143 (76%) of these psychiatrists responded to a questionnaire. Their mean age was 46 (range=33-68 years), and their mean length of time in specialist practice was 13 years (range=1-35 years). One hundred thirteen (79%) were men, and 114 (80%) were in general adult psychiatry. Forty-three (30%) had obtained their specialist qualifications overseas, either in the United Kingdom or in the United States. Nearly 60% of the psychiatrists (N=83) were in private fee-for-service practice, and at the time of the survey the vast majority of the Australian population were insured for office psychiatry. The remainder of the sample were in public sector practice, but most had small private practices. When recruited for the study they were asked, "In pursuit of your primary specialist interest what therapeutic techniques do you use most frequently?" Eighty-two (57%) said intensive psychotherapy, 36 (25%) said counseling, and only 11 (8%) nominated

Views about treatment were obtained from a questionnaire that presented five case histories based on actual patients. Each case history included information about the presenting symptoms, the history of the complaint, the patient's behavior during the interview, and brief details of relevant personal history in regard to family, childhood, schooling, work, sex, marriage, previous illness, and usual level of psychosocial functioning. Each patient's history was edited so that all symptoms were consistent with the single DSM-III diagnosis given at the end of the history. The five histories described patients diagnosed as having panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, somatization disorder, and hypo-

chondriasis.

Received Aug. 20, 1986; revised Jan. 20, 1987; accepted March 17, 1987. From the School of Psychiatry, University of New South Wales, Sydney, Australia. Address reprint requests to Dr. Andrews, Clinical Research Unit for Anxiety Disorders, University of New South Wales at St. Vincent's Hospital, 299 Forbes St., Sydney, N.S.W. 2010, Australia.

The Quality Assurance in Aspects of Psychiatric Practice Project was conducted under the aegis of the Royal Australian and New Zealand College of Psychiatrists and funded by the Australian Department of Health.

The authors thank Dr. George Vaillant for commenting on an early draft of this paper.

Copyright © 1987 American Psychiatric Association.

TABLE 1. Treatment Categories Recommended by 143 Psychiatrists for Patients With Anxiety and Somatoform Disorders^a

Treatment Category	Panic Disorder ^b (N=142)	Generalized Anxiety Disorder ^c (N=137)	Obsessive- Compulsive Disorder ^d (N=127)	Somatization Disorder ^c (N=128)	Hypochondriasis ^f (N=128)	Total ^g (N=662)
Supportive psychotherapy						
Included in treatment plan	59	59	61	59	62	60
Identified as critical	21	23	7	38	39	26
Behavioral psychotherapy			·			
Included in treatment plan	56	59	72	20	38	49
Identified as critical	13	23	44	5	11	19
Benzodiazepines				-		
Included in treatment plan	59	56	28	6	27	36
Identified as critical	10	7	1	0	1	4
Antidepressants						·
Included in treatment plan	39	24	54	3	32	30
Identified as critical	15	9	19	0	4	9
Intensive psychotherapy						
Included in treatment plan	31	25	12	41	2.5	27
Identified as critical	23	18	9	28	18	19
Family therapy						
Included in treatment plan	18	33	34	0	35	24
Identified as critical	2	4	2	0	5	3
Further assessment						
Included in treatment plan	26	20	15	18	19	20
Identified as critical	3	1	0	2	2	1
All other therapies						
Included in treatment plan	42	33	12	34	19	28
Identified as critical	6	4	4	6	5	5
No therapy identified as critical	8	11	14	22	16	14

^aResults are presented by diagnosis as the percent of treatment plans recommending this treatment and the percent of treatment plans identifying this treatment as critical. The numbers in parentheses represent the total number of plans.

Respondents were asked what their management plan would be for each patient. They coded their own management plans from a glossary that listed the psychotropic drugs and described and defined 32 types of psychotherapy, family therapy, and behavioral psychotherapy. They could also specify which treatment they considered critical to treat the particular illness. A similarly designed questionnaire and glossary had proven satisfactory in two previous waves of the project (4, 5).

RESULTS

The individual treatments recommended by the physicians were recoded into eight broad categories (table 1). Each treatment plan proposed usually contained a number of treatments (mean=2.7, range=1-7). The proportion of treatment plans recommending the inclusion of each treatment category is shown in table 1, both for each diagnosis and in total. The proportion of treatment plans identifying a particular treatment category as critical to the outcome is also displayed in table 1.

Benzodiazepines, supportive psychotherapy, and behavioral psychotherapy were recommended in more than half of the plans for both panic disorder and generalized anxiety disorder. Behavioral psychotherapy, supportive psychotherapy, and antidepressant drugs were the most common recommendations for obsessive-compulsive disorder, but supportive psychotherapy was the only treatment that was featured in more than half of the treatment plans for either somatization disorder or hypochondriasis. For three diagnoses the "all other therapy" category was used by a third or more of the physicians, mostly to recommend control of medication. We explored the diversity of recommendations by examining tree diagrams that illustrated all the combinations of treatments. The greatest diversity occurred in the recommendations for panic disorder: 92 distinct treatment category combinations were recommended in the 142 treatment plans.

Across all five disorders the psychotherapies (supportive, dynamic, and behavioral) were most likely to be regarded as critical (table 1). Benzodiazepines and family therapy were not. Intensive psychotherapy or supportive psychotherapy was regarded as critical for panic disorder by one-fifth of the respondents, sup-

^b467 treatments were recommended; the mean number of treatments per plan was 3.3.

c423 treatments were recommended; the mean number of treatments per plan was 3.1.

d364 treatments were recommended; the mean number of treatments per plan was 2.9.

c233 treatments were recommended; the mean number of treatments per plan was 1.8. f328 treatments were recommended; the mean number of treatments per plan was 2.6.

g1,815 treatments were recommended; the mean number of treatments per plan was 2.7.

portive psychotherapy or behavioral psychotherapy was viewed as critical for patients with generalized anxiety, behavioral psychotherapy was clearly the treatment of choice in obsessive-compulsive disorder, and supportive psychotherapy was favored for both somatization disorder and hypochondriasis. Although there was never a majority of physicians in favor of a category of treatment as critical for a particular diagnosis, there were significant differences between the pattern of recommendations for panic disorder (χ^2 = 35.9, df=4, p<.01), obsessive-compulsive disorder $(\chi^2=129.6, df=4, p<.01)$, somatization disorder $(\chi^2=74.2, df=4, p<.01)$, and hypochondriasis $(\chi^2=$ 33.2, df=4, p<.01) and the recommendations for the remainder of the conditions. The recommendations for generalized anxiety disorder were not significantly different from the pooled recommendations for the other four disorders ($\chi^2=3.9$, df=4, n.s.). The pattern of recommendations for these five disorders was significantly different from the treatment used by each physician in the pursuit of his or her primary specialist interest ($\chi^2=158.5$, df=4, p<.001). Thus, the physicians were responding to the diagnostic and clinical features of each case.

The next issue concerns the details of the critical treatments. For panic disorder, 23% of the physicians identified intensive psychotherapy as critical (table 1), and most of them included a psychotherapy specified in the glossary as "brief psychoanalytically oriented psychotherapy with a limited focus and aims, therapy being conducted once a week for up to six months.' The respondents thought that a median of 41 hours of psychotherapy would produce some psychodynamic resolution. For generalized anxiety disorder, 23% identified supportive psychotherapy (defined in the glossary as "empathy, guidance, support, and reasoning to decrease anxiety in order to equip the patient for more effective dealings with real life situations") as critical to produce improvement in apprehensive expectation after 13 hours of therapy. Twenty-three percent identified behavioral psychotherapy—almost always relaxation procedures (progressive muscle relaxation, meditation, autogenic training)—as critical and expected improvement from 6 hours of therapy. For obsessive-compulsive disorder, 44% identified as critical a median of 18 hours of behavioral psychotherapy, either response prevention procedures ("including self, family, or therapist imposed prevention of behaviors") or in vivo exposure ("techniques aimed at extinguishing a behavior by exposing the patient to the stimulus in real life") to produce a significant improvement. The physicians were less optimistic about somatization disorder and recommended supportive psychotherapy weekly for 6 months as critical in reducing consulting behavior. In hypochondriasis, 3 months of weekly supportive psychotherapy was regarded as the critical treatment to reduce bodily symptoms.

Were the characteristics of the psychiatrists likely to influence their treatment recommendations? Neither age or sex nor specialist training in the United States or the United Kingdom was significantly related to the identification of particular treatments as critical. Irrespective of diagnosis, private psychiatrists were more likely than public sector psychiatrists to identify anti-depressant drugs and intensive psychotherapy as critical treatments. There was no evidence that private psychiatrists recommended longer periods of psychotherapy than did their colleagues in public practice.

DISCUSSION

A sample of Australian psychiatrists provided detailed plans of treatment in response to five DSM-IIIcongruent case histories of patients with different anxiety and somatoform disorders. The complexity of the treatment plans offered was considerable, but with the possible exception of those for obsessive-compulsive disorder there was no agreement about treatment regimens. The physicians were more specific when asked which treatments were critical, but even so little consensus was apparent. In no disorder was a single treatment regarded as critical by more than half the physicians, and only behavioral psychotherapy for obsessive-compulsive disorder and supportive psychotherapy for both somatization disorder and hypochondriasis were regarded as critical by more than onethird of the respondents. These recommendations represent how the psychiatrists said that they would treat these patients; what they actually do might be different, but there is hardly likely to be agreement in practice if there is no agreement in their views.

How do these recommendations of practicing psychiatrists relate to the wider literature? The recommendations can be put in perspective by comparing the literature reviews and the consensus of the opinions of reports developed for the Quality Assurance Project (6–8) (table 2). In panic disorder the review of the literature and the experts concurred that both antidepressant drugs and behavioral psychotherapy were effective treatments (6); thus, neither empirical data nor expert opinion supported the physicians' views that intensive psychotherapy or supportive psychotherapy is an effective treatment.

The psychiatrists were equally likely to recommend supportive psychotherapy or behavioral psychotherapy for the treatment of generalized anxiety disorder. Support for behavioral psychotherapy was provided by the literature and by the experts. However, although the literature provided evidence about the value of benzodiazepines, the experts were concerned about dependence and emphasized the use of intensive psychotherapy. In obsessive-compulsive disorder, the psychiatrists, the literature (12), and the experts (7) concurred that behavioral psychotherapy was the treatment of choice and that antidepressants were also likely to prove helpful. It is harder to judge what support there is for the psychiatrists' advocacy of supportive and intensive psychotherapy in somatization disorder and hypochondriasis. The treatment lit-

TABLE 2.	Findings of the Quality	Assurance Proi	ect Regarding the	Treatment of C	hoice of the Neuroses

Diagnosis	Treatments Identified as Critical by 143 Psychiatrists	Treatments Cited in Literature (6, 12)	Experts' Opinions About Treatments of Choice (6–8)
Panic disorder	Intensive psychotherapy, supportive psychotherapy	Antidepressants, behavioral psychotherapy	Antidepressants, behavioral psychotherapy
Generalized anxiety disorder	Supportive psychotherapy, behavioral psychotherapy	Benzodiazepines, behavioral psychotherapy	Intensive psychotherapy, behavioral psychotherapy
Obsessive-compulsive disorder	Behavioral psychotherapy, antidepressants	Behavioral psychotherapy, antidepressants	Behavioral psychotherapy
Somatization disorder	Supportive psychotherapy, intensive psychotherapy	No empirical literature review available	Supportive psychotherapy
Hypochondriasis	Supportive psychotherapy, intensive psychotherapy	No empirical literature review available	Intensive psychotherapy

erature on either condition was not susceptible to an empirical review, but the project experts were specific (8). They advised limited long-term supportive psychotherapy and good medical consultations for somatization disorder and regarded insight-oriented psychotherapy as inappropriate. For hypochondriasis they recommended brief intensive psychotherapy, family therapy, and excellent medical consultation as the basis of good treatment. Thus, their recommendations differed from those of the practice sample.

The implications of this study are important. Psychiatrists in Australia agree about the treatment of the psychoses, and these views are in accord with both the treatment outcome literature and the opinions of experts (4, 5, 9, 10). In an earlier part of this project we found little evidence of consensus in the practice sample's views about the treatment of agoraphobia (11) and the neurotic depressions (10). In this study, with the possible exception of obsessive-compulsive disorder, we could find little consensus about the treatment of the other anxiety or somatoform disorders.

This information, if generally applicable, is of concern to the profession of psychiatry, for it is precisely in the treatment of the neurotic disorders that persons with other professional and nonprofessional backgrounds have been able to represent themselves as competent. Perhaps this lack of unanimity among psychiatrists has encouraged the growth of these alternative sources of treatment. But it is the implications for patients with neurotic disorders that are the more serious. The neuroses are common and serious causes of psychiatric morbidity. They constitute one-third of the workload of psychiatrists (2) and in Australia are significant causes of social security disability payments. Yet, in Australia, public sector support is primarily directed toward schizophrenia, severe depression, and alcoholism, and health insurers have been reluctant to provide coverage for the treatment of the neuroses.

It is time the profession developed some consensus as to how patients with neuroses should be treated. The NIMH consensus project has tended to deal with areas in which agreement could be reached. The Australian Quality Assurance Project sought to develop treatment outlines for the more common psychiatric disorders and found this easy in the psychoses but

more difficult in the neuroses. The APA Task Force on Treatments of Psychiatric Disorders and the World Health Organization are both looking to do something similar. Some psychiatrists disapprove of such attempts to hurry the development of knowledge, preferring to rely on the gradual progress of research, but undirected research is heavily biased by the prevailing paradigms of the day and by the needs of the funding agencies, whether governmental or commercial. Consensus development, by highlighting what is broadly agreed on and what is still uncertain, may act as a better stimulus to a balanced program for funding research. The establishment of agreed-on treatment protocols would be of benefit to clinicians, would act as a focus for treatment-oriented research, and would suffice until supplanted by research-based information.

- Marmor J, Scheidemandel P, Kanno C: Psychiatrists and Their Patients: A National Survey of Private Office Practice. Washington, DC, Joint Information Service of the American Psychiatric Association, 1975
- Andrews G, Hickie C: The people seen by Sydney psychiatrists. Aust NZ J Psychiatry 1986; 20:492–495
- 3. Quality Assurance Project: A treatment outline for agoraphobia. Aust NZ J Psychiatry 1982; 16:25-33
- Quality Assurance Project: A treatment outline for depressive disorders. Aust NZ J Psychiatry 1983; 17:129–146
- Quality Assurance Project: Treatment outlines for the management of schizophrenia. Aust NZ J Psychiatry 1984; 18:19–38
- Quality Assurance Project: Treatment outlines for the management of anxiety states. Aust NZ J Psychiatry 1985; 19:138–151
- Quality Assurance Project: Treatment outlines for the management of obsessive compulsive disorders. Aust NZ J Psychiatry 1985; 19:240–253
- Quality Assurance Project: Treatment outlines for the management of the somatoform disorders. Aust NZ J Psychiatry 1985; 19:397–407
- Andrews S, Vaughan K, Harvey R, et al: A survey of practising psychiatrists' views on the treatment of schizophrenia. Br J Psychiatry 1986; 149:357–364
- Armstrong M, Andrews G: A survey of practising psychiatrists' views on treatment of the depressions. Br J Psychiatry 1986; 149:742-750
- 11. Hall W, Weekes P, Harvey R, et al: A survey of practising psychiatrists' views on the treatment of agoraphobia. Aust NZ J Psychiatry 1982; 16:225–233
- 12. Christensen H, Hadzi-Pavlovic D, Andrews G, et al: Behavior therapy and tricyclic medication in the treatment of obsessive compulsive disorder: a quantitative review. J Consult Clin Psychol (in press)

Abnormal Prolactin Response to Haloperidol Challenge in Men With Schizophrenia

Nicholas A. Keks, M.B., F.R.A.N.Z.C.P., David L. Copolov, Ph.D., F.R.A.N.Z.C.P., and Bruce S. Singh, Ph.D., F.R.A.N.Z.C.P.

Fourteen drug-free male patients with schizophrenia had a smaller and slower prolactin response to 0.5 mg of intravenous haloperidol than 14 normal age- and sex-matched control subjects. This finding supports the presence of dopaminergic dysfunction in schizophrenia.

(Am J Psychiatry 1987; 144:1335-1337)

S ince abnormal dopamine-related neuroendocrine responses have been detected in Huntington's disease (1) and Parkinson's disease (2), demonstrable hypothalamopituitary dysfunction may also occur in schizophrenia. Both dopamine agonists and antagonists have been used as endocrine probes in the disorder. Altered apomorphine-induced secretion of growth hormone has been reported (3, 4), although the use of chlorpromazine as a probe of prolactin secretion has not yielded similarly positive findings (5).

Rubin and Hays (6) found that in normal men low doses of intravenous haloperidol result in reproducible prolactin responses that show considerable intersubject variation. The technique appears to reflect differences in pituitary lactotrope dopamine receptor sensitivity rather than suprapituitary mechanisms (7). We used this technique to determine whether abnormal responses attributable to dopaminergic dysfunction were present in a group of men with schizophrenia

who were either naive about neuroleptics or neuroleptic free for prolonged periods.

METHOD

The 14 male patients had been admitted to a large metropolitan psychiatric hospital because of acute psychotic episodes. They all gave written informed consent to participate in the study. Drug treatment history was obtained from all possible sources, and a urine drug screen was performed. Four patients had never received neuroleptics, seven patients had been drug free for over 12 months, and three patients had last received neuroleptics between 6 and 12 months before testing. We excluded subjects who had used antidepressants, stimulants, or hallúcinogers within the previous month, those who had significant physical illness, and those who were taking prescribed medications.

Each patient underwent a full psychiatric and physical evaluation. A diagnosis of *DSM-III* schizophrenia was based on the Structured Clinical Interview for *DSM-III* (8), which was administered by a clinician blind to neuroendocrine test results. During the testing period the patients were also assessed with the Brief Psychiatric Rating Scale (BPRS). They were permitted diazepam for sedation if required, but none received it in the 12 hours preceding neuroendocrine testing. The control subjects were 12 medical students and two staff members, who were assessed by interview.

The patients and control subjects were of similar age (table 1). Five of the patients were experiencing their first admission to the hospital for psychosis. The mean \pm SD duration of illness for the whole group was 5.5 ± 4.4 years. Their mean \pm SD BPRS score was 29.6 ± 8.5 .

Neuroendocrine testing was performed on the third

Received Feb. 20, 1987; accepted May 27, 1987. From the Mental Health Research Institute of Victoria and the Department of Psychological Medicine, Monash University Royal Park Hospital, Victoria, Australia. Address reprint requests to Dr. Copolov, Mental Health Research Institute of Victoria, Private Bag 3, P.O., Parkville, Victoria 3052, Australia.

Supported by a grant from the National Health and Medical Research Council of Australia.

Copyright © 1987 American Psychiatric Association.

TABLE 1. Prolactin Response to Haloperidol in 14 Schizophrenic Men and 14 Age-Matched Male Control Subjects

					Area Under Curve Minus Baseline Area (mU/liter/min) ^b					
	Age (years)		Baseline				Peak ^a		225 Minutes After Haloperidol Injection	
Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Patients Control subjects	27.3 24.1	7.2 3.0	139.3 173.6	64.3 77.8	301.5 808.2	158.6 755.4	202.5 346.5	98.8 159.6	126.0 400.0	118.7 362.9

^aPeak at 90 minutes for the patients and 45 minutes for the control subjects.

or fourth day after admission. At 9:00 a.m. a 20-gauge Venflon cannula was inserted in a forearm vein. Three baseline blood samples were taken at 15-minute intervals. Haloperidol was diluted to 0.5 mg/ml with normal saline solution, 1 ml was injected, and blood samples were taken at 45-minute intervals for 225 minutes. During testing the patients were not permitted to exercise or sleep. The plasma was separated by centrifugation and stored frozen. Prolactin was measured with a double antibody radioimmunoassay technique by technicians blind to the clinical data. The inter- and intra-assay coefficients of variation were 11.9% and 4.1%, respectively. An overall measure of prolactin response was obtained by calculating the area under the response curve and subtracting the baseline area.

RESULTS

The results are shown in table 1. There was no significant difference in baseline prolactin level between the patients and control subjects, nor was there a correlation between baseline level and any measure of prolactin response to haloperidol. The mean responses at each sampling time for the two groups were compared by means of two-way analyses of variance with the Greenhouse-Geisser adjustment for degrees of freedom (9). There was a significant main effect of diagnostic group (F=10.66, df=1, 26, p<.005) and a significant interaction effect between time and diagnostic group (F=4.12, df=1.33, 34.54, p<.05), indicating a smaller and slower response in the patients. The overall response measure, the area under the response curve minus the baseline area, was smaller in the patients (separate variance t=2.69, df=15.8, p<.02). There was overlap between the patient and control subject responses, although the patients had a smaller variance of response than the control subjects (Levene F=4.39, df=1, 26, p<.05).

There was no correlation between prolactin response and age. Within the patient group there was a negative correlation between response and illness duration (r=-.59, df=13, p<.05) and a positive correlation between response and BPRS score at the time of testing (r=.61, df=13, p<.02). There were no significant differences in response when the patients were grouped according to whether they had ever received

neuroleptics (10 patients) or whether they had received diazepam before testing (nine patients).

DISCUSSION

After a single low dose of haloperidol, the neuroleptic-free group with DSM-III schizophrenia released less prolactin and released it more slowly than did the male control subjects. These findings may be due to altered dopamine receptor sensitivity of pituitary lactotropes or differences in endogenous dopamine release in schizophrenia. The results could also be explained by intergroup differences in serum haloperidol concentrations. In normal men studied by Rubin and Hays (6), however, only 36% of the variability in prolactin responses was attributable to drug concentrations. Nonetheless, we are measuring serum haloperidol concentrations in further studies. Although some patients received diazepam before neuroendocrine testing, the doses given were small and there were no significant differences in response between the treated and untreated patients. Intake of up to 250 mg/ day of diazepam has been shown not to affect prolactin levels (10). Despite the comparatively prolonged neuroleptic-free periods of our schizophrenic patients, long-term drug effects cannot be excluded.

Our findings are consistent with data reported from apomorphine challenge studies (3, 4). To our knowledge, this is the first report of abnormal prolactin response to dopamine antagonist challenge in schizophrenic men. Prior negative reports (5) might be due to the use of a neuroleptic with poor receptor subtype selectivity and its administration by the intramuscular route. In contrast, we used haloperidol administered intravenously to generate more physiologically interpretable data.

The diagnostic specificity of the abnormal prolactin response to haloperidol will be examined in an ongoing study; comparisons between schizophrenia and other disorders need to be carried out. The correlation of the response with illness severity and the possibility of a trait dysfunction also need to be investigated.

REFERENCES

1. Hayden MR, Vink AI, Paul M, et al: Impaired prolactin release in Huntington's chorea: evidence for dopaminergic excess.

bSignificant difference between groups (separate variance t=2.69, df=15.8, p<.02).

- Lancet 1977; 2:423-428
- Laihinen A, Rinne UK: Function of dopamine receptors in Parkinson's disease: prolactin responses. Neurology 1986; 36: 393-395
- 3. Whalley LJ, Christie JE, Brown S, et al: Schneider's first-rank symptoms of schizophrenia: an association with increased growth hormone response to apomorphine. Arch Gen Psychiatry 1984; 41:1040–1043
- 4. Meltzer HY, Kolakowska T, Fang VS, et al: Growth hormone and prolactin response to apomorphine in schizophrenia and the major affective disorders: relation to duration of illness and depressive symptoms. Arch Gen Psychiatry 1984; 41:512–519
- Meltzer HY, Busch D: Serum prolactin response to chlorpromazine and psychopathology in schizophrenics: implications for the dopamine hypothesis. Psychiatry Res 1983; 9:285-299
- Rubin RT, Hays SE: Variability of prolactin response to intravenous and intramuscular haloperidol in normal adult men. Psychopharmacol 1979; 61:17–24
- Hays SE, Rubin RT: Differential prolactin responses to haloperidol and TRH in normal adult men. Psychoneuroendocrinology 1981; 6:45-52
- Spitzer RL, Williams JB: Structured Clinical Interview for DSM-III. New York, New York State Psychiatric Institute, 1983
- Greenhouse SW, Geisser S: On methods in the analysis of profile data. Psychometrika 1959; 24:95–112
- Weizman A, Tyano S, Wijsenbeek H, et al: High dose diazepam treatment and its effect on prolactin secretion in adolescent schizophrenic patients. Psychopharmacology (Berlin) 1984; 82: 382, 385

Outpatient Group Therapy for Schizophrenic Substance Abusers

David J. Hellerstein, M.D., and Beth Meehan, C.S.W.

A once-a-week outpatient therapy group was designed for schizophrenic substance abusers. Over 1 year, the group members (including dropouts) had a marked decrease in days of hospitalization.

(Am J Psychiatry 1987; 144:1337-1339)

Despite the frequency of concurrent psychosis and substance abuse (1–3), little attention has been paid to specific outpatient treatment for patients who have both disorders. Schizophrenic substance abusers are reported to be difficult, noncompliant, and resistant to approaches used by psychiatric treatment systems or by substance abuse programs. As a result, they are often excluded from both systems of outpatient care. They tend to become crisis users of the emergency

room and of inpatient psychiatric and substance detoxification systems (1, 4).

These patients pose difficult treatment problems. For group treatment of the schizophrenic patient, a supportive, nurturing, and noncritical treatment position is recommended (5). In contrast, treatment of substance abusers is often highly confrontational (6). Schizophrenic substance abusers may not respond well to either approach. They are reported to be "pseudosociopathic" (1, 2, 7) and therefore may not do well in groups with other schizophrenic patients. Because of their underlying psychotic illness, however, they may be too vulnerable to withstand the direct confrontation employed in therapeutic communities and other substance abuse treatment programs.

Some reports (1, 8, 9) have suggested that treatment of psychotic substance abusers must include both psychiatric and substance abuse treatment. Other authors (10) stress the importance of proper psychopharmacological management. There has been little quantitative work on the effectiveness of treatment for such patients.

METHOD

In 1984 we began an outpatient therapy group for patients with the dual diagnoses of schizophrenia and

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received Aug. 11, 1986; revised April 20, 1987; accepted May 27, 1987. From the Psychiatric Outpatient Service, Department of Psychiatry, Beth Israel Medical Center. Address reprint requests to Dr. Hellerstein, Psychiatric Outpatient Service, Beth Israel Medical Center, 10 Nathan D. Perlman Place, New York, NY 10003.

The authors thank Henry Pinsker, M.D., Neil Zolkind, M.D., and Joel Redfield, Ph.D., for their comments.

Copyright © 1987 American Psychiatric Association.

TABLE 1. Characteristics of Schizophrenic Substance Abusers and Days of Hospitalization Before and After Group Therapy

				Neuroleptic					rs of dization
				Dose (mg/day of	Estimated	Group Therapy Attendance		Year Before	Year After
Patient	Age chlorpi		chlorpromazine equivalents)	Medication Compliance ^a	Months ^b	% of Months ^b Sessions		Group Began	
1 2	42 38	M M	Alcohol, marijuana Hydromorphone, diazepam	500 1000	Good Good	12 12	53.2 95.7	20 54	11 0
3	34	M	Heroin, cocaine, barbiturates, diazepam	1200	Fair	12	55.3	43	30
4	27	M	Alcohol, marijuana	500	Poor	2 (dropped out)	70.0	33	10
5	21	F	Diazepam, heroin, barbiturates	950	Poor	12	56.6	43	0
6	31	M	Alcohol, cocaine, marijuana	1200	Fair	12	30.4	29	2
7	35	M	Diazepam, heroin, barbiturates	0		3 (discharged)	64.3	16	21
8	34	M	Diazepam, marijuana, ethchlorvynol	375	Good	(moved)	83.3	55	4
9	32	M	Alcohol, cocaine, antidepressants	0		6 (dropped out)	42.1	83	0
10	32	F	Cocaine, alcohol, barbiturates, diazepam	330	Fair	(dropped out)	53.3	6	0
Mean	32.7		,	605		8.0	59.7	38.2	7.8 ^c

aGood=two-thirds or more of the prescribed doses were taken; fair=one-third to two-thirds of doses taken; poor=fewer than one-third of

substance abuse. Its purpose was to treat patients with histories of multiple hospitalizations and poor compliance with outpatient follow-up. The criteria for admission included a diagnosis of chronic schizophrenia and a history of significant substance abuse (alcohol, opiates, pills, etc.). No patient who met these criteria was rejected. The patients were referred from the inpatient psychiatric/substance abuse unit of Beth Israel Medical Center and from outpatient psychiatric, methadone, and alcohol treatment programs.

Ten patients entered the group in the first 3 months (table 1). All were initially diagnosed as having chronic undifferentiated or paranoid schizophrenia; however, the final diagnoses were different for two patients: mixed organic brain syndrome (patient 7) and borderline personality disorder (patient 5). Five patients (patients 2, 3, 6, 7, and 8) had been maintained with methadone (mean dose=60 mg/day), and this regimen was continued. Neuroleptics were prescribed for eight patients, and it was estimated that six of them had fair to good compliance (one-third or more of the prescribed doses taken).

The group was open-ended and met once a week for 11/4 hours. Few initial demands were made: we did not insist on total abstinence or 100% attendance. The patients did not have to agree to take psychotropic medication. However, we did insist that they express some desire to decrease substance abuse.

The clinical approach included the following phases: 1) engagement, in which the patients identified their

mutual problems, especially their psychotic symptoms, chronic suicidality, and drug abuse, 2) interpersonal skill development focusing on helping the patients learn to listen and respond to one another, and 3) problem solving. In phase 3, as the patients became more stable, they began to work on family issues, use of time, housing, and work problems. Psychoeducation about drug abuse, psychosis, and psychotropic medication was pursued on an ongoing basis. We also strongly encouraged attendance at appropriate selfhelp groups such as Alcoholics Anonymous and Drugs Anonymous.

RESULTS

Of the initial 10 patients, seven remained in treatment at 6 months, and five remained at 1 year. Table 1 shows each patient's attendance record and days of hospitalization in the year before and the year after the beginning of group therapy. In the 3 years before they joined the group, the 10 patients had spent a total of 737 days in our hospital, or an average of 245.7 days/ year (155, 200, and 382 days of hospitalization 3, 2, and 1 years before the group was started). In the first year of the group the members (including dropouts) had hospitalizations totaling 78 days. Thus, the mean±SD number of days of hospitalization decreased from 24.6 ± 21.4 days/year to 7.8 ± 9.9 days/year. While this was not statistically significant (Wilcoxon

^bA patient was considered a dropout if he or she did not return after missing three sessions.

Significant decrease in hospitalization days (T=1, p<.01; Wilcoxon matched-pairs signed ranks test).

matched-pairs signed ranks test), there was a significant decrease in the mean number of days of hospitalization for the time from 1 year before the group began $(38.2\pm21.4 \text{ days/year})$ to 1 year after it began $(7.8\pm$ 9.9 days/year) (T=1, p<.01; Wilcoxon matched-pairs signed ranks test).

DISCUSSION

In this homogeneous group of schizophrenic substance abusers, the patients' complex dual problems were understood and addressed. Appropriate psychotropic medications were used to control psychotic symptoms, and the patients were encouraged to attend meetings of self-help substance abuse groups. Within the group, treatment strategies for both disorders were used; emphasis shifted from one strategy to the other according to the patients' needs at a given time.

Coordination of treatment with inpatient staff and alcohol and methadone counselors was important in managing relapses and in improving compliance. Family involvement was also helpful. We were not successful with patients who repeatedly came to group meetings intoxicated or with those who had significant organic impairment.

The success of this pilot therapy group in engaging some schizophrenic substance abusers in outpatient treatment and in decreasing hospitalization suggests that such patients might benefit from a similar approach in other settings, such as day hospitals or substance abuse treatment programs.

- 1. Salzman B: Substance abusers with psychiatric problems, in Substance Abuse: Clinical Problems and Perspectives. Edited by Lowinson JH, Ruiz P. Baltimore, Williams & Wilkins, 1981
- 2. Quitkin FM, Rabkin JG: Hidden psychiatric diagnosis in the alcoholic, in Alcoholism and Clinical Psychiatry. Ecited by
- Solomon J. New York, Plenum, 1982
 3. O'Brien CP, Woody GE, McLellan AT: Psychiatric disorders in opioid-dependent patients. J Clin Psychiatry 1984; 45:9-13
- 4. Pinsker H: Addicted patients in hospital psychiatric units. Psychiatr Annals 1983; 13:619-623
- 5. O'Brien CP: Group psychotherapy with schizophre na and affective disorders, in Comprehensive Group Psycho herapy, 2nd ed. Edited by Kaplan HI, Sadock BJ. Baltimore, Williams & Wilkins, 1982
- 6. Lowinson JH: Group psychotherapy with substance abusers and alcoholics. Ibid
- 7. Geller MP: Sociopathic adaptations in psychiatric patients.
- Hosp Community Psychiatry 1980; 31:108-112 8. LaPorte DJ, McLellan AT, O'Brien CP, et al: Treatment response in psychiatrically impaired drug abusers. Comp. Psychiatry 1981; 22:411-419
- 9. Kofoed L, Kania J, Walsh T, et al: Outpatient treatment of patients with substance abuse and other coexisting psychiatric disorders. Am J Psychiatry 1986; 143:867-872
- 10. Ciccone P, O'Brien C, Khatami M: Psychotropic agents in opiate addiction: a brief review. Int J Addict 1980; 15: 49-513

Antipsychotic Effect of Buprenorphine in Schizophrenia

Claudia Schmauss, M.D., Alexander Yassouridis, Ph.D., and Hinderk M. Emrich, M.D.

The antipsychotic potency of the partial opiate agonist buprenorphine was evaluated in 10 neuroleptic-free schizophrenic patients suffering from frequent hallucinations, delusions, and severe formal thought disorders. Buprenorphine had a pronounced antipsychotic effect, which lasted about 4 hours, in patients with schizophreniform disorders (N=4) and paranoid schizophrenia (N=3).

(Am J Psychiatry 1987; 144:1340-1342)

he question of whether endogenous opioids are A pathogenetically involved in schizophrenia has been repeatedly addressed (1-4). Clinical approaches to this question have involved pharmacological studies on the antipsychotic efficacy of opiate agonists and antagonists (2, 3). In this study, the antipsychotic potency of the partial opiate agonist buprenorphine was tested in patients with acute or acutely exacerbated paranoid, hallucinatory symptoms. Buprenorphine chemically resembles the narcotic agonist etorphine and the narcotic antagonist diprenorphine $(5, \hat{6})$. Its pharmacological effects resemble those of the μ-opiate receptor ligand morphine, but its lower intrinsic activity and its slower dissociation from its receptor make buprenorphine suitable for testing as an opioid compound with long duration of action and low addiction potential (6). Morphine-like psychotropic effects after acute administration of buprenorphine (i.e., sedation and euphoria) have been reported but were observed only at doses four to six times higher than the dose applied in this study (6).

METHOD

Ten psychiatric inpatients (three men and seven women whose ages ranged from 19 to 43 years) with acute paranoid and hallucinatory symptoms participated in this study after written informed consent was

Received Feb. 14, 1986; revised Aug. 12 and Dec. 29, 1986, and April 20, 1987; accepted May 28, 1987. From the Max Planck Institute for Psychiatry, Munich. Address reprint requests to Dr. Schmauss, Section of Molecular Neurobiology, Yale University School of Medicine, 333 Cedar St., P.O. Box 3333, New Haven, CT 06510

Supported by Bundesminsterium für Forschung und Technologie. Copyright © 1987 American Psychiatric Association.

obtained. None had an organic illness. All patients had been free of neuroleptic medication for at least 5 weeks. Of the 10 patients, four were suffering from a first manifestation of a schizophreniform disorder, three were experiencing a repeat episode of paranoid schizophrenia and had been exposed previously to neuroleptic treatment, and the remaining three fulfilled the criteria for residual schizophrenia (i.e., continuously ill, blunted or inappropriate affect, and social withdrawal) and were experiencing acutely exacerbated paranoid and hallucinatory symptoms (DSM-III criteria).

In a 4-day double-blind, placebo-controlled crossover study, the patients received in a random sequence one sublingual tablet per day of 0.2 mg of buprenorphine or placebo. Drug and placebo tablets, which were identical in appearance, were administered at 1:00 p.m., and psychopathological changes were scored hourly by use of the Inpatient Multidimensional Psychiatric Rating Scale (7) and a course assessment scale, Verhaltens-Beobachtungs-Skala (2), which grades the severity of individual target symptoms from 0 to 8.

For statistical analysis, the multivariate approach of analysis of variance of a repeated measures design with two within-subjects factors (Time and Treatment) and two between-subjects factors (Group and Scale) was used. Due to the large dispersion of the data, a logarithmic transformation was initially performed.

RESULTS

Table 1 presents the percentage of reduction of psychotic symptoms after buprenorphine and placebo treatment as estimated by the results of both rating scales. Statistical analysis revealed no significant main or interaction effect of scale. From the remaining interaction effects, only the interactions Group by Treatment and Treatment by Time were significant (Wilks' multivariate tests of significance: F=2.73, df=10, 174, p<.05, and F=5.73, df=4, 188, p<.05, respectively). A separate consideration of the Treatment by Time interaction revealed that buprenorphine, unlike placebo, contributed to significant differences in the percentage of reduction of psychotic symptoms at 60, 120, 180, and 240 minutes after drug administration (Wilks' multivariate test of significance: F=19.22, df=4, 51, p<.05).

TABLE 1. Reduction of Psychopathological Symptoms in 10 Schizophrenic Patients After Buprenorphine and Placebo Treatment^a

Posttreatment Reduction of Psychopathological Symptoms (%)																
DSM-III		60 M	inutes			120 N	linutes			180 N	1inutes		240 Minutes			
Schizophrenia Subgroup and	Dr	ug	Placebo		Dr	Drug		Placebo		Drug		ebo	Drug		Placebo	
Rating Scale	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mear	SD
Schizophreniform disorder (N=4) Inpatient													- -			
multidimensional Course	41.9	37.2	11.6	19.1	62.5	23.0	5.1	5.0	58.4	22.3	9.1	9.0	55.5	29.2	8.3	10.0
assessment ^b Paranoid (N=3)	36.8	33.2	9.7	12.5	56.4	34.1	9.7	12.5	61.3	26.1	8.2	13.6	62.4	26.8	6.4	9.6
Inpatient multidimensional	22.8	22.7	17.4	23.8	26.1	28.0	5.3	9.1	32.0	28.0	5.3	9.1	28.7	33.8	19.5	27.1
Course assessment ^b Residual (N=3)	17.4	22.3	0.0	0.0	22.7	27.8	10.2	16.2	22.7	27.8	10.2	16.2	48.7	34.6	8.3	20.4
Inpatient multidimensional	31.8	26.5	34.7	48.5	10.7	16.8	20.6	28.7	10.7	16.8	20.6	28.7	29.6	32.7	14.5	19.8
Course assessment ^b	10.6	13.9	18.3	27.4	15.4	26.7	7.6	17.0	15.4	26.7	7.6	17.0	17.5	29.3	15.1	22.7

^aMeasurements at 360 minutes after drug administration revealed no significant changes in the psychopathometric scores compared to vaseline values in all three groups.

^bVerhaltens-Beobachtungs-Skala.

A trend analysis of the sample means over time revealed that a quadratic equation for buprenorphine is required in order to provide a satisfactory fit for the means (F=29.15, df= $\hat{1}$, 54, p<.05). This fact leads to the assertion that there is a high reduction of psychotic symptoms during the first hours after buprenorphine is taken and that the trend flattens in the middle and declines further toward the end of the time period. If one considers the trend structure within the various diagnostic groups only, the schizophreniform disorder group and the paranoid schizophrenia group show this nonlinear trend (F=12.71, df=1, 20, p<.05, and F=7.94, df=1, 17, p<.05, respectively). In contrast, the residual schizophrenia group shows no trend. These results indicate that the significant differences in the percentage of reduction of psychotic symptoms over time stem only from the schizophreniform disorder and paranoid schizophrenia groups.

Finally, the analysis of special contrasts of the three diagnostic groups within the two treatments revealed a significant difference for buprenorphine between the schizophreniform disorder group and the residual schizophrenia group (F=36.88, df=1, 54, p<.05) and between the residual schizophrenia group and the paranoid schizophrenia group (F=10.46, df=1, 54, p<.05) but no difference for placebo.

In contrast to the reduction of schizophrenic target symptoms after buprenorphine treatment, the reduction of the Inpatient Multidimensional Psychiatric Rating Scale scores for anxiety and depression was only 15%. The unremarkable changes in the scores for retardation and apathy and impaired functioning indicate that buprenorphine treatment does not lead to sedation or other nonspecific alterations of psychological functions.

DISCUSSION

Buprenorphine had a pronounced antipsychetic effect, which lasted about 4 hours, in seven of 10 patients suffering from schizophrenia. Only in those three patients who had residual symptoms was puprenorphine ineffective. A simultaneous recording of psychopathometric scores for anxiety, depression, sedation, and impairment of functioning furthe indicates that the obtained reduction of schizor renic target symptoms after 0.2-mg buprenorphine treatment was not the result of nonspecific effects of a narcotic analgesic (e.g., sedative, anxiolytic, cr pronounced euphoric effects). These preliminary findings indicate that opiates have an antipsychotic effect in patients with nonresidual schizophrenia and, ad litionally, underline the necessity to carefully subclassify patients with schizophrenia according to the course of the disease and the establishment of residual synptoms for similar studies.

- Terenius L, Wahlstrom A, Lindstrom L, et al: Increased CSF levels of endorphins in chronic psychosis. Neurosci Lett 1976; 3: 157-162.
- 2. Emrich HM, Cording C, Piree S, et al: Indication of an antipsychotic action of the opiate antagonist naloxone. Pharmakopsychiatr Neuropsychopharmakol 1977; 10:265–270
- Berger PA, Watson SJ, Akil H, et al: β-Endorphin and schizophrenia. Arch Gen Psychiatry 1980; 37:635-640
- Schmauss C, Emrich HM: Dopamine and the action of colates: a reevaluation of the dopamine hypothesis of schizophrema. Biol Psychiatry 1985; 20:1211–1231
- Cowan A, Doxey JC, Harry EJR: The animal pharmacology of buprenorphine, an oripavine analgesic agent. Br J Pl armacol 1977; 60:547-554

- Jasinski DR, Pevnick JS, Griffith JD: Human pharmacology and abuse potential of the analgesic buprenorphine. Arch Gen Psychiatry 1978; 35:501-516
- Lorr M, Klett CJ, McNair DM, et al: Inpatient Multidimensional Psychiatric Scale (IMPS). Palo Alto, Calif, Consulting Psychologists Press, 1962

Symptomatic HIV Infection of the CNS in a Patient Without Clinical Evidence of Immune Deficiency

Alexandra Beckett, M.D., Paul Summergrad, M.D., Theo Manschreck, M.D., Halyna Vitagliano, M.D., Mary Henderson, Ph.D., M. Lynn Buttolph, M.D., and Michael Jenike, M.D.

Major depression with psychotic features, dementia, and focal neurologic abnormalities appeared in a Haitian man without AIDS or other syndromes of immune compromise. Neurologic evaluation, including brain biopsy, was nondiagnostic, but CSF culture revealed human immunodeficiency virus (HIV).

(Am J Psychiatry 1987; 144:1342–1344)

The acquired immune deficiency syndrome (AIDS) is marked by the occurrence of disease indicative of defective cell-mediated immunity. It is caused by the human immunodeficiency virus (HIV). In addition to AIDS, less severe disorders of immune function are also caused by HIV. These include the lymphadenopathy syndrome and AIDS-related complex, which is characterized by conditions such as oral candidiasis, malaise, and fever. The proportion of patients who go on from these conditions to AIDS is unknown, but estimates run as high as 25% (1) to 34.2% (2).

More than 40% of AIDS patients have neurologic symptoms during the course of their illness; in 10% these are the initial chief complaint (3). All levels of the neuraxis may be involved, with cerebral involvement the most common. The most frequent syndrome is subacute encephalitis, also called "AIDS encephalopathy" and "HIV dementia complex" (4, 5). It is char-

acterized initially by subtle deficits in concentration and recent memory, lethargy, and loss of sexual drive, often with psychomotor retardation and progression over a number of weeks or months to global dementia and incontinence. Patients may develop motor signs, including hyperreflexia, spastic-ataxic gait, and hemiparesis.

There is substantial evidence that HIV infects the CNS, causing neurologic illness (6–8). While HIV causes neuropsychiatric syndromes in patients with AIDS, it is unknown to what extent such illness occurs in patients with AIDS-related complex or in otherwise asymptomatic persons who have the virus and/or positive results on the test for antibodies (9, 10).

We report the case of a patient without AIDS or AIDS-related complex who presented with neuropsychiatric illness and concomitant HIV infection of the CNS.

CASE REPORT

Mr. A, a 38-year-old obese Haitian black man, was admitted to the hospital with depression, paranoia, and suicidal ideation. He had been seen at a clinic 8 months previously for depression; at that time, impairments in attention and recent memory were noted. An internist, who was consulted when Mr. A complained of right leg weakness, had found no neurologic abnormality. A CAT scan showed mild cortical atrophy. Analysis of CSF revealed a normal glucose level, a mildly elevated protein level of 56 mg/100 ml, and no white cells.

Two months before admission, Mr. A had developed hypersomnia and hyperphagia. He complained of auditory hallucinations commanding him to harm himself. His past psychiatric history was unremarkable, as was that of his family. He had had a history of drinking two pints of rum a day for 15 years but had stopped 10 years previously. He

Copyright © 1987 American Psychiatric Association.

Received Aug. 11, 1986; revised Jan. 27 and April 27, 1987; accepted June 22, 1987. From the Inpatient Psychiatric Unit, Massachusetts General Hospital; and the Department of Psychiatry, Harvard Medical School, Boston. Address reprint requests to Dr. Beckett, West End Group Practice, ACC-712, Massachusetts General Hospital, Fruit St., Boston, MA 02114.

denied intravenous drug use and homosexual activity. His past medical history was notable for persistently positive results on serum VDRL tests despite two adequate courses of penicillin.

Mr. A had emigrated from Haiti 15 years previously. He had worked as an artist and teacher until he was fired 2 years before admission. He was subsequently unable to work, lost interest in his art and personal appearance, and had occasional difficulty understanding others.

Physical examination revealed symmetrically increased deep tendon reflexes without clonus or other neurologic abnormalities. Laboratory studies showed a normal WBC count, differential, and T cell ratio and positive results on serum VDRL tests at a dilution of 1:16.

Mr. A's attitude was guarded but cooperative. His speech was halting, tangential, and at times incoherent. He reported sadness, and his affect was tearful though constricted. He reported recurrent self-destructive impulses and persecutory delusions but denied hallucinations, thought insertion, withdrawal, or broadcasting.

Mr. A scored 18 of a possible 30 on the Mini-Mental State examination, with deficits in orientation, attention, short-term memory, and simple commands. His scores on the WAIS-R demonstrated widespread cognitive impairments: his verbal IQ was 71, performance IQ was 65, and full-scale IQ was 67. The marked variability in his scores on the WAIS-R subtests, his 12th-grade education, and his former profession suggested a higher premorbid intelligence.

Three days after admission, Mr. A developed a right pronator drift, right-sided hyperreflexia, and mild hemiparesis. His confusion increased, and his speech was frequently unintelligible. A CAT scan with contrast revealed impressive atrophy and two areas of calcification anterior to the lateral ventricles. An EEG showed generalized slowing with left frontotemporal delta activity. His CSF protein level was 50 mg/100 ml, and his CSF VDRL test results were negative, with 4+ positive flourescent treponemal antibody. He received a 3-week course of intravenous penicillin, although neurosyphilis was deemed unlikely.

Over the ensuing 5 weeks, Mr. A's condition deteriorated rapidly. He became agitated, unable to follow simple commands, and incontinent of urine. A magnetic resonance scan revealed areas of T2 prolongation in periventricular white matter. Toxoplasma titers were in the midrange, and other viral and fungal studies showed unremarkable results. HIV antibody testing by the enzyme-linked immunosorbent assay (ELISA) technique was not repeated, but results on the more specific Western Blot test were positive.

A CAT scan showed new 1-cm calcifications in the frontal poles and multiple diffuse areas of periventricular enhancement. Left frontal lobe biopsy revealed gliosis without other diagnostic abnormality. A repeat lumbar puncture showed a WBC of 6 cells/mm³. CSF cultured 25 days previously turned positive for HIV.

Mr. A became consistently disoriented; uncommunicativeness alternated with outbursts of garbled verbalization (including his native French) and threatening posture. His Mini-Mental State score fell to 10. The WAIS-R was repeated, with additional neuropsychological testing. Mr. A's performance declined markedly from that of the examination 3 months earlier. His verbal IQ was 59, performance IQ was 56, and full-scale IQ was 52. Frontal lobe function deteriorated with massive perseveration, as did his verbal and nonverbal memory, both immediate and delayed. He was unable to write his name, draw a clock, name objects, point to body parts, or identify left and right.

In summary, Mr. A's condition deteriorated rapidly from major depression with psychotic features at the time of admission to global dementia with focal neurologic deficits. In retrospect, subtle abnormalities of cognition and considerable alterations in personality had been evident at least 8 months previously. The patient currently resides in a chronic care hospital.

DISCUSSION

Although psychiatric and cognitive disorders occur in patients with AIDS and AIDS-related complex, their occurrence in asymptomatic infected persons has been less well studied. Certainly, a virus that is lymphotropic and neurotropic may have immunologic and neurologic sequelae. Furthermore, a disorder might occur in one system without a disorder in the other. The low incidence of reported HIV-related neuropsychiatric dysfunction without concomitant clinical immune disease may reflect our failure to consider it in the differential diagnosis.

Mr. A had a catastrophic and rapidly progressive disorder. The nature, incidence, and course of lesser syndromes remain relatively unknown. Given that reversible mental status failures may occur in the presence of affective disorders and anxiety states and that cognitive deficits may result from substance abuse, prospective analysis is necessary to delineate the discrete contributions of HIV infection to neuropsychiatric deficits.

There is no one diagnostic test or battery to identify HIV-related neuropsychiatric disease. In individuals with AIDS and an encephalopathy, in the absence of a known cause for CNS dysfunction, neurologic examination results are normal or show deficits such as weakness, increased motor tone, or spastic-ataxic gait (6); the EEG is normal or demonstrates diffuse slowing; and the CSF is normal or shows a slight elevation of protein level, pleocytosis, or a decreased glucose level (9). The ratio of T helper to T suppressor lymphocytes is often reversed (11). HIV serology by the ELISA technique is usually, but not always, positive. The ELISA is more sensitive, and therefore more likely to detect antibodies to HIV, than the more specific Western Blot. The finding of positive results on the Western Blot in the face of negative results on the ELISA is very unusual and probably indicates that an ELISA repeated on the same occasion would also have been positive.

Presentations that should raise suspicion of CNS HIV infection include known risk for HIV exposure and neurologic or cognitive impairment with or without concurrent psychiatric disorder when routine neurologic and dementia evaluation fail to reveal another cause for the impairment. Psychiatrists will increasingly be involved in the evaluation and treatment, if not the initial diagnosis, of persons with HIV-related disorders. It is essential that we familiarize ourselves with the spectrum of disease caused by HIV and, in particular, with its neuropsychiatric manifestations.

REFERENCES

- Hardy A, Allen J, Morgan W, et al: The incidence rate of acquired immunodeficiency syndrome in selected populations. JAMA 1985; 253:215–220
- Goedert JJ, Biggar RJ, Weiss SH, et al: Three-year incidence of AIDS in five cohorts of HTLV-III risk group members. Science 1986; 231:992–995
- Levy RM, Bredesen DE, Rosenblum ML: Neurological manifestations of AIDS: experience at UCSF and review of the literature. J Neurosurg 1985; 62:475–495
- Snider WD, Simpson DM, Nielsen S, et al: Neurological complications of acquired immune deficiency syndrome: analysis of 50 patients. Ann Neurol 1983; 14:403–418
- Navia BA, Price RW: Dementia complicating AIDS. Psychiatric Annals 1986; 16:158–166
- 6. Shaw GM, Harper ME, Hahn BH, et al: HTLV-III infection in

- brains of children and adults with AIDS encephalopathy. Science 1985; 227:177-181
- Ho DD, Rota TR, Schooley RT, et al: Isolation of HIV from cerebrospinal fluid and neural tissues of patients with neurologic syndromes related to the acquired immunodeficiency syndrome. N Engl J Med 1985; 313:1493–1497
- 8. Landesman SH, Ginzberg HM, Weiss SH: Special report: the AIDS epidemic, N Engl I Med 1985; 312:521-525
- AIDS epidemic. N Engl J Med 1985; 312:521-525
 9. Navia BA, Price RW: The acquired immunodeficiency syndrome dementia complex as the presenting or sole manifestation of human immunodeficiency virus infection. Arch Neurol 1987; 44:65-69
- Navia BA, Jordan BD, Price RW: The AIDS dementia complex, I: clinical features. Ann Neurol 1986; 19:517-524
- Bach MC, Boothby JA: Dementia associated with human immunodeficiency virus with a negative ELISA. N Engl J Med 1986; 315:891-892

Frequency and Presentation of Neuroleptic Malignant Syndrome: A Prospective Study

Paul E. Keck, Jr., M.D., Harrison G. Pope, Jr., M.D., and Susan L. McElroy, M.D.

In an 18-month prospective assessment of 679 hospitalized, neuroleptic-treated patients, the authors, using previously defined operational criteria, diagnosed neuroleptic malignant syndrome in six cases (0.9%). This supports their earlier finding that the syndrome appeared in about 1% of neuroleptic-treated patients.

(Am J Psychiatry 1987; 144:1344–1346)

Neuroleptic malignant syndrome is a serious and sometimes fatal side effect of neuroleptic drugs; it is characterized by fever, severe muscle rigidity, and autonomic changes. In a recent retrospective survey of the frequency and presentation of neuroleptic malignant syndrome at our center over a 1-year period (March 1, 1984, through Feb. 28, 1985), we found an unexpectedly high frequency of 1.4% ±0.5% (1).

Received Dec. 19, 1986; revised April 20, 1987; accepted June 22, 1987. From the Epidemiology Laboratory, Laboratories for Psychiatric Research, Mailman Research Center, McLean Hospital; and Harvard Medical School, Boston. Address reprint requests to Dr. Keck, McLean Hospital, 115 Mill St., Belmont, MA 02178.

Supported in part by the Scottish Rite Schizophrenia Research Program, Northern Masonic Jurisdiction (Drs. Keck and Pope). Copyright © 1987 American Psychiatric Association.

However, the retrospective design of that study created several methodologic limitations. First, the particular 12-month study period selected might not have been representative, since it was chosen after we had by chance observed two cases of neuroleptic malignant syndrome in rapid succession. Second, some cases retrospectively diagnosed as neuroleptic malignant syndrome might have represented merely severe extrapyramidal signs, perhaps coupled with unrecognized medical conditions that may have mimicked neuroleptic malignant syndrome. This caveat was raised in a recent survey of 48 cases of putative neuroleptic malignant syndrome in which 34 patients displayed fever or other symptoms that might alternatively have been explained by a concurrent medical condition (2). Similarly, Boyer (3), analyzing 42 patients referred to an intensive care unit with symptoms suggestive of neuroleptic malignant syndrome, identified a potentially etiologic or contributory medical condition in every case.

It might also be argued, conversely, that our retrospective method underestimated the true frequency of neuroleptic malignant syndrome: some milder cases occurring during the 1-year period might have gone unrecognized or might have been suggested but forgotten by the staff members whom we interviewed many months later.

TABLE 1. Characteristics of Six Patients With Neuroleptic Malignant Syndrome^a

Patient	Age (years)	Sex	Primary Diagnosis	Daily Neuroleptic Dose	Duration of Neuroleptic Exposure (days)	Concomitant Medications (daily dose and plasma level)	Duration of Symptoms (days)
1	18	F	Schizophrenia, paranoid	Molindone, 200 mg	7	Lithium, 900 mg (0.8 meq/liter); benztropine, 4 mg	5
2	42	F	Bipolar disorder, manic	Haloperidol, 6 mg	16	Lithium, 1200 mg (1.0 meg/liter)	3
3	54	F	Bipolar disorder, manic	Molindone, 10 mg	2	Lithium, 600 mg (0.4 meq/liter); clonazepam, 4 mg	4
4	40	M	Major depression with psychotic features	Haloperidol, 10 mg	24	Nortriptyline, 100 mg; benztropine, 1 mg; captopril, 25 mg	7
5	50	M	Bipolar disorder, manic	Haloperidol, 6 mg	2	Benztropine, 2 mg	4
6	21	M	Bipolar disorder, manic	Haloperidol, 10–40 mg	8	Benztropine, 4 mg	14

^aAll patients displayed hyperthermia (temperature of 37.8°C or greater), prominent parkinsonian signs including muscle rigidity, hypertension, and tachycardia. Patients 1, 3, 4, and 5 displayed diaphoresis; patients 1 and 3 displayed delirium; and patients 5 and 6 displayed nutism. Patients 1–5 displayed elevations in levels of creatine kinase, and all six displayed leukocytosis. (An expanded version of this table, with detailed findings for each patient, is available from the authors on request.)

To address these issues, we conducted a prospective survey of the frequency of neuroleptic malignant syndrome for the 18-month interval (March 1, 1985, through Sept. 30, 1986) immediately following our initial study period.

METHOD

At the conclusion of our retrospective survey, we asked all hospital clinicians to alert us to any cases of suspected neuroleptic malignant syndrome among McLean Hospital inpatients. We evaluated all cases within 24 hours, using operational criteria presented previously (1) and taking care to assess the physical and laboratory evidence of possible concomitant medical conditions (especially infections and dehydration) on the basis of chart data, interviews with the treating physician, and direct physical examination of the patient. All but one of the patients were also examined during the episode by an internist.

Of eight patients referred to us during this period, six displayed definite neuroleptic malignant syndrome not explained by a medical condition. Of the two patients excluded, one displayed severe catatonia, possibly exacerbated by neuroleptics, but not fever or autonomic dysfunction. The second displayed fever and an elevated creatine kinase level, but was receiving only lithium carbonate and had not received neuroleptics within the previous 6 months (4). This patient had had neuroleptic malignant syndrome when treated with neuroleptics during earlier hospitalizations; her case has been described in previous reports (5, 6). She was one of three patients admitted to the hospital during the 18-month study period who were not given neuroleptics specifically because they were known to

have developed neuroleptic malignant syndrome during previous admissions. None of these three cases is included in our frequency calculations.

Using methods described previously (1), we estimated that the total number of patients exposed to neuroleptics during the study period was 679.

RESULTS

The clinical features of the six patients are summarized in table 1. None suffered medical complications of neuroleptic malignant syndrome; all were successfully treated on the psychiatric units without transfer to a medical or intensive care unit. Treatment included discontinuation of neuroleptics for all six patients, bromocriptine (7.5–20 mg/day for 3–10 da/s) for three patients, amantadine (300 mg/day for 9 days) for one patient, and lorazepam (3 mg/day for 5 days) for one patient.

In our cohort of approximately 679 patients receiving neuroleptics, the finding of six cases of neuroleptic malignant syndrome yields an estimated frequency of $0.9\% \pm 0.3\%$.

DISCUSSION

In a prospective survey of approximately 679 neuroleptic-treated patients admitted during an 18-month period, we discovered six who developed neuroleptic malignant syndrome, yielding an estimated frequency of 0.9%. Combining these data with our retrospective data for the preceding 12-month period (acknowledging, as discussed earlier, the possible sources of error in the retrospective data) yields 13 cases in 30 months

among 1,162 neuroleptic-treated patients, or a frequency of $1.1\% \pm 0.4\%$.

This prospective survey overcame several methodologic limitations of our previous retrospective study. First, the 18-month survey period was selected prospectively and was not prompted by the observation of specific cases of neuroleptic malignant syndrome. Second, patients could be evaluated, both by ourselves and by an internist, during the actual episode of suspected neuroleptic malignant syndrome in order to confirm the presence of neuroleptic malignant syndrome and to rule out possible medical conditions that might otherwise have accounted for the symptoms.

Several impressions emerge. First, it appears that the frequency of neuroleptic malignant syndrome, even when evaluated under these more rigorous conditions, is indeed in the range of 1%, as suggested in our retrospective study. However, it should be noted that three of the six patients in this report received concomitant lithium, which may have increased the frequency of neuroleptic malignant syndrome over that which is observed with neuroleptics alone. Second, our findings support the observations of Addonizio et al. (7) that neuroleptic malignant syndrome may represent a spectrum of physiologic reactions to neuroleptics, with mild and more severe forms. However, we were en-

couraged to find that, possibly as a result of heightened awareness of neuroleptic malignant syndrome at our center, cases were generally recognized and treated in their mild stages and patients did not develop the more "malignant" features observed in some of the cases in our earlier series.

- Pope HG Jr, Keck PE Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome in a large psychiatric hospital. Am J Psychiatry 1986; 143:1227–1233
- Levinson DF, Simpson GM: Neuroleptic-induced extrapyramidal symptoms with fever: heterogeneity of the "neuroleptic malignant syndrome." Arch Gen Psychiatry 1986; 43:839–848
- Boyer P: Neuroleptic malignant syndrome: the French data, in CME Syllabus and Scientific Proceedings in Summary Form, 139th Annual Meeting of the American Psychiatric Association. Washington, DC, APA, 1986
- Gabuzda D, Frankenburg F: Lithium-induced hyperthermia. J Clin Psychopharmacol (in press)
- Downey GP, Rosenberg M, Caroff S, et al: Neuroleptic malignant syndrome: patient with unique clinical and physiologic features. Am J Med 1984; 77:338-340
- Caroff S, Rosenberg H, Gerber J: Neuroleptic malignant syndrome and malignant hyperthermia (letter). Lancet 1983; 1:244
- Addonizio G, Susman VL, Roth SD: Symptoms of neuroleptic malignant syndrome in 82 consecutive inpatients. Am J Psychiatry 1986; 143:1587–1590

Bowel Obsessions Responsive to Tricyclic Antidepressants in Four Patients

Michael A. Jenike, M.D., Halyna L. Vitagliano, M.D., Joseph Rabinowitz, Ed.M.. Donald C. Goff, M.D., and Lee Baer, Ph.D.

The authors report on four patients with disabling bowel obsessions who responded to tricyclic antidepressant medication despite the absence of depressive symptoms. The relationship of this symptom constellation to DSM-III obsessive-compulsive disorder and social phobia is discussed. (Am J Psychiatry 1987; 144:1347–1348)

Over the last 2 years four patients were referred to our obsessive-compulsive disorders clinic whose primary symptom was overwhelming fear of losing bowel control and having a bowel movement in public. All became progressively disabled and planned their lives around bowel movements. They all spent over an hour on the toilet before leaving home, straining to get rid of every bit of feces, and located toilets wherever they went to be prepared for an "emergency." All four patients had almost total resolution of symptoms after tricyclic antidepressant therapy, even though none met DSM-III criteria for major depression.

CASE REPORTS

Case 1. Mr. A, a 24-year-old executive, spent up to 2 hours straining to have a bowel movement before going out and planned his whole life around going to the bathroom. He limited all his activities because he feared being incontinent. His symptoms were particularly prominent when he was anxious or in unfamiliar surroundings.

Although Mr. A had always been concerned about regular bowel movements, his disabling symptoms did not begin until age 21. He denied having symptoms of depression, psychosis, panic attacks, or other psychopathology. His mother was fearful, occasionally depressed, and obsessive, and his sister often spent up to an hour clearing her bowels. A distant aunt with an unknown diagnosis died in a state hospital. His father was an alcoholic.

Imipramine was prescribed for Mr. A, and the dose was

increased to 150 mg/day within a week; within 10 cays, he had no obsessive fears about bowels, stopped bethroom rituals, started dating again, and reported feeling normal. Three months later, his symptoms returned when he decreased the dose to 50 mg/day, but they remitted when the dose was increased to 100 mg/day.

Case 2. Ms. B, a 56-year-old manager, reported "increasing anxiety about my diarrhea." She noted severe anticipatory anxiety about diarrhea and persistently searched for bathrooms in case she could not control her bowds. She restricted her work activities and often called in ill imajor meetings were planned. She spent \$180 a month for parking because she feared becoming incontinent on the sul way.

Ms. B's symptoms began without a precipitating event when she was about 50 years old and gradually worsened. She denied having diarrhea and stated that her bowel movements were, in fact, quite normal. She denied having symptoms of depression, thought disorder, panic attacks, or other psychopathology but admitted to mild checking behaviors, particularly checking the stove and doors. Her family was without psychopathology, but her mother had similar bowel concerns and spent excessive time in the bathroom.

Ms. B began taking imipramine at a dose that was increased to 100 mg/day within a week. Within a month, she was free of bowel symptoms and had resumed her previous level of activity. She resisted attempts to taper her medication and continued to do well at 15-month follow-up.

Case 3. Mr. C, a 34-year-old executive, had an over-whelming fear that he would not be able to get to a bathroom and would defecate in his pants. Whenever he got anxious, he felt the urge to defecate. On two occasions over the past 15 years, he was slightly incontinent of feees.

Mr. C reported that his symptoms began in the seventh grade when he left school permanently because a teather told him he could not go to the bathroom and he feared that he might defecate in his pants. He denied performing compulsive rituals or having psychotic thoughts or depressing esymptoms but described himself as anxious and occasionally had classic panic attacks. One brother had milder boosel concerns. His sister and father were "nervous" individuals, and his father died of alcohol-related difficulties.

Doxepin was prescribed for Mr. C, and the cose was increased to 150 mg h.s. within 3 days. Within 2 weeks, his bowel obsessions were largely gone, and he discont nued his lengthy bathroom sessions and search for toilets. His panic attacks ceased when his dose of doxepin was increased to 200 mg h.s. Because of secondary agoraphobia and extreme shyness, he was referred for behavior therapy, which consisted of assertiveness training and exposure. His simptoms

Received May 27, 1986; revised Oct. 17, 1986, and Feb. 17, 1987; accepted March 23, 1987. From the Obsessive-Compulsive Disorders Clinic and Research Unit, Massachusetts General Hospital. Address reprint requests to Dr. Jenike, Bulfinch 3, Massachusetts General Hospital, Boston, MA 02114.

Copyright © 1987 American Psychiatric Association.

remained in remission at a 24-month follow-up; he completed high school equivalency examinations and finished a year of college with an A average.

Case 4. Ms. D, a 57-year-old mother who came to be evaluated for agoraphobia and anxiety, had first developed symptoms 20 years earlier when, while shopping, she felt an overwhelming urge to defecate. From then on, she feared losing bowel control, particularly in stores. She was unable to leave home without going to the bathroom first. She developed panic attacks a few years before coming to our clinic and avoided situations where these attacks might occur. She appeared anxious but denied having depressive symptoms.

When her symptoms began, Ms. D had undergone a barium enema and psychiatric evaluation and was told that it was "all in your head." She had been treated unsuccessfully with Lomotil and chlordiazepoxide. She denied having any prior psychiatric symptoms or family history of psychiatric disorder, except for her 31-year-old daughter who suffered from agoraphobia with panic attacks.

She became free of agoraphobic, bowel-obsessive, and panic symptoms after taking 50-75 mg h.s. of imipramine for 2 weeks at blood levels of 126 and 169 µg/liter, respectively. At the same time that she began taking imipramine, she was also seen for behavioral treatment, which consisted of relaxation, thought stopping, cognitive restructuring, and in vivo exposure (taking increasingly longer walks and entering stores either accompanied by her therapist or alone). At the latest follow-up, she had been seen for 21 sessions of behavior therapy and remained free of bowel obsessions.

DISCUSSION

Patients with obsessive-compulsive disorder are commonly separated into subgroups on the basis of symptom clusters. These include patients who check, wash, are purely obsessional, or have obsessional slowness. A number of features suggest that the patients we have described may represent another distinct subgroup. These four patients had remarkably similar symptoms, including obsessive fear of having a bowel movement in public and spending long periods in the bathroom trying to completely rid themselves of feces. In addition, each spent considerable time searching for bathrooms in case of an "emergency." A second feature was the relative absence of compulsive rituals or obsessive thoughts not related to bowel movements. Only Ms. B had some very mild checking behavior. A third feature was the presence of psychopathology in the family. Even though each of these patients functioned at an extremely high level, most had many relatives with severe psychiatric illness. In addition, two patients (Mr. A and Mr. C) had siblings with bowel obsessions, and another (Ms. B) had a mother who may have had a similar disorder.

The most remarkable feature of this syndrome is its response to medication. The relative effect of concomitantly starting behavior therapy and medication in Ms. D cannot be determined. Mr. C suffered from agoraphobia secondary to panic attacks and required

behavior therapy even though he had resolution of bowel symptoms with medication alone.

In some respects, this syndrome is similar to social phobia in that the individual fears that he may act in a way which will be humiliating or embarrassing. The observation that these patients did not exhibit symptoms when at home with no plans to go out strengthens this similarity. Despite the considerable disability of such phobias, there are almost no data on pharmacologic treatment for them. A few double-blind studies found phenelzine beneficial in subjects with both agoraphobia and social phobia (1-5), but none reported response among subjects with social phobia alone. Because agoraphobic patients have been shown to benefit from monoamine oxidase inhibitors (MAOIs), one cannot be sure that subjects with social phobia and without agoraphobia would benefit from MAOI therapy. Liebowitz et al. (5) reported that 11 patients meeting DSM-III criteria for social phobia showed at least moderate improvement with phenelzine. To our knowledge, there are no reports of tricyclic antidepressant trials in patients with social phobia.

There has been increasing awareness of the usefulness of antidepressants for a variety of anxiety disorders (6), panic disorder or agoraphobia with panic attacks (7), classical obsessive-compulsive disorder (8), obsessive thoughts alone (9), posttraumatic stress disorder (10), and social phobia (5). The possibility of adding the syndrome of bowel obsession to this list should foster further research and clinical interest. Whatever the mechanism of pharmacologic response or the relationship to other psychopathology, it is clinically important that similar patients receive trials of antidepressants for this extremely disabling syndrome.

- 1. Tyrer P, Candy J, Kelly D: A study of the clinical effects of phenelzine and placebo in the treatment of phobic anxiety. Psychopharmacologia 1973; 32:237-254
- 2. Solyom L, Heseltine GFD, McClure DJ, et al: Behavior therapy vs drug therapy in the treatment of phobic neurosis. Can Psychiatr Assoc J 1973; 18:25-31
- 3. Mountjoy CO, Roth M, Garside RF, et al: A clinical trial of phenelzine in anxiety depressive and phobic neuroses. Br J Psychiatry 1977; 131:486-492
- 4. Solyom C, Solyom L, LaPierre Y, et al: Phenelzine and exposure
- in the treatment of phobias. Biol Psychiatry 1981; 16:239–247

 5. Liebowitz MR, Fyer AJ, Gorman JM, et al: Phenelzine in social
- phobia. J Clin Psychopharmacol 1986; 6:93-98 Liebowitz MR: The efficacy of antidepressants in DSM-III anxiety disorders, in Psychiatry Update: The American Psychiatric Association Annual Review, vol III. Edited by Grinspoon L. Washington DC, American Psychiatric Press, 1984
- 7. Golger S, Grunhaus L, Birmacher B, et al: Treatment of spontaneous panic attacks with clomipramine. Am J Psychiatry 1981; 138:1215-1217
- Jenike MA, Baer L, Minichiello WE (eds): Obsessive-Compulsive Disorders: Theory and Management. Littleton, Mass, PSG,
- 9. Jenike MA, Armentano M, Baer L: Disabling obsessive thoughts responsive to antidepressants. J Clin Psychopharmacol 1987; 7:33–35
- 10. Hogben GL, Cornfield RB: Treatment of traumatic war neurosis with phenelzine. Arch Gen Psychiatry 1981; 38:440-445

Inadequate Plasma Concentrations in Some High-Dose Methadone Maintenance Patients

Forest S. Tennant, Jr., M.D., Dr.P.H.

The author studied 18 heroin addicts who had been maintained on 80 mg/day of methadone and who abused drugs or alcohol. His findings suggest that in some cases of aberrant methadone metabolism, the dose can be raised to achieve plasma concentrations adequate to eliminate drug and alcohol abuse.

(Am J Psychiatry 1987; 144:1349-1350)

A dequate methadone plasma concentration for 24 hours after an oral dose appears essential to provide stabilized maintenance (1–5). Studies have found that patients who take daily doses of methadone which exceed 80 mg/day and who maintain an average plasma concentration of about 400 ng/ml show little drug use and good social stability (2, 5–7). This study was conducted to determine if some methadone maintenance patients have aberrant methadone metabolism and if a dose of methadone can be raised from 80 to 100 mg/day and achieve plasma concentrations adequate to eliminate drug and alcohol abuse.

METHOD

Eighteen heroin addicts in a methadone maintenance program of approximately 500 persons who had been maintained on 80 mg/day of methadone for 30 or more days and who were continuously abusing drugs or alcohol were selected for study. There were six women and 12 men ranging in age from 29 to 41 years. Their overall duration of heroin use ranged from 5 to 22 years. Liver function in these subjects appeared adequate in that no subject had jaundice or ascites or demonstrated more than a 10% deviation from normal values for serum glutamic oxalacetic acid, alkaline phosphatase, bilirubin, lactic dehydrogenase, and albumin. We determined that renal disease was absent

Received Sept. 26, 1986; revised April 13, 1987; accepted May 28, 1987. From the UCLA School of Public Health, UCLA Center for Health Sciences, Los Angeles. Address reprint requests to Dr. Tennant, Community Health Projects, Inc., Research and Education Division, 336½ South Glendora Ave., West Covina, CA 91790. Copyright © 1987 American Psychiatric Association.

in all subjects on the basis of normal serum BUN and creatinine levels and the absence of protein and glucose in urine. All were persistently abusing alcohol, diazepam, marijuana, cocaine, and/or heroin, and all had less than 200 ng/ml of methadone in their plasma 24 hours after an observed oral dose of 80 mg. Every subject complained that methadone was ineffective in that it did not "hold for 24 hours" or that "it wears off in the evening." Drug and alcohol use was documented by self-report, urine test results, needle mark examinations, and/or alcohol breath tests. All subjects volunteered and gave written informed consent to participate in the study.

One subgroup of the 18 subjects consisted of two women and two men who volunteered for sequential plasma analysis. Twenty-four hours after taking 80 mg of methadone, they were again given their daily dose (80 mg) of methadone under direct observation. A blood sample was taken at this time, and repeated blood samples were drawn at 2, 6, 12, and 18 hours postdose to be analyzed for methadone plasma concentration by gas chromatography (8). Two male control subjects were selected who had been maintained with methadone at 80 mg/day, claimed that their methadone dose was effective and would "hold" for 24 hours, and did not demonstrate drug or alcohol abuse.

The other 14 subjects were assessed for methadone plasma concentration and opioid withdrawal score 24 hours after an observed oral dose of 80 mg. The opioid withdrawal score was based on the presence or absence of the following signs and symptoms: lacrimation, rhinorrhea, pupil dilation, diaphoresis, hyperreflexia, myalgia, nausea, insomnia, and anorexia. Each sign and symptom was scored on a scale where 0=absent, 1+=mild, 2+=moderate, and 3+=severe. The maximal withdrawal score was 27. After this assessment, the subject's daily methadone maintenance dose was progressively raised by 3- to 5-mg increments over a 2- to 4-week period until a 100-mg/day dose was achieved. After subjects were maintained at 100 mg for 1-4 weeks, a repeat opioid withdrawal score and plasma methadone concentration were determined. In addition, self-report of drug and alcohol abuse was documented, and urine and breath alcohol tests and examination for fresh needle marks were done.

RESULTS

Three of the four subjects selected for sequential plasma sampling had no detectable methadone in their plasma at the time sampling began. The other subject had a plasma methadone level of only 123 ng/ml. One subject never had any detectable methadone in plasma throughout the 18-hour sampling period. Only one subject had methadone in plasma at the end of 18 hours; his peak level was 1039 ng/ml at 12 hours. The two control subjects had plasma methadone concentrations of 288 and 356 ng/ml at the start of plasma sampling and up to 794 ng/ml during the 18-hour sampling period.

The mean±SD 24-hour plasma concentration of methadone in the 14 subjects whose daily dose was raised from 80 to 100 mg/day rose from 42.14±55.6 (range, 0-146 ng/ml) to 76.86±121.42 ng/ml (range, 0-458 ng/ml) (t=0.6394, df=13, n.s.; two-tailed test). Five (35.7%) of the 14 did not show detectable levels of methadone 24 hours after the oral dose of 80 mg, and two of these did not show a detectable level after a 100-mg dose. The mean±SD opioid withdrawal score of the 14 subjects dropped from 9.29±3.65 to 7.14 ± 2.28 (t=2.868, df=13, p<.02; two-tailed test). Only one (6.7%) of these 14 subjects had an increase in his 24-hour plasma concentration to above 200 ng/ ml; it rose from a nondetectable level to 458 ng/ml, at which time the subject stated that his dose was "holding" and preventing withdrawal symptoms. His selfreport and urine test results also indicated absence of drug and alcohol abuse.

DISCUSSION

Previous studies on methadone maintenance plasma concentrations indicate a wide range of levels at constant doses, not only between patients but in the same patient over time (1, 4, 9); this is an expected finding given differences in patterns of metabolism and absorption from the gastrointestinal tract. Some complaints of withdrawal symptoms and "not holding" in methadone maintenance patients have been found to be unrelated to oral dose and plasma concentration (1, 4, 6, 9). Despite these findings, patients who take an oral methadone maintenance dose of 80 mg/day or

greater and who demonstrate a plasma concentration of over 200 ng/ml 24 hours later usually perform better in a methadone maintenance program with respect to drug use and social stability (2, 3).

The data we have presented show that there is a subgroup of patients who metabolize methadone in an aberrant fashion. Although the majority of methadone maintenance patients can maintain an adequate 24-hour plasma concentration, some apparently cannot do so even at a high dose of 80 to 100 mg/day. From our data, we cannot determine how common abnormal metabolism is. Our subjects were selected by identifying 18 persons at one point in time from a 500-patient methadone program; they were the only subjects who were being given 80 mg/day of methadone and were known to continuously abuse heroin, marijuana, cocaine, benzodiazepines, and/or alcohol. Persons responsible for methadone maintenance programs should be alert to this subgroup of patients who may require additional or alternative treatment.

- 1. Goldstein A: Blind dosage comparison and other studies in a large methadone program. J Psychedelic Drugs 1971; 4:177–181
- Tennant FS Jr, Rawson RA, Cohen A, et al: Methadone plasma levels and persistent drug abuse in high dose methadone patients. Subst Alcohol Actions Misuse 1983; 4:369-374
- Holmstrand J, Anggard E, Gunne LM: Methadone maintenance: plasma levels and therapeutic outcome. Clin Pharmacol Ther 1978; 23:175–180
- 4. Horns WH, Rado M, Goldstein A: Plasma levels and symptom complaints in patients maintained on daily dosage of methadone hydrochloride. Clin Pharmacol Ther 1975; 17:636–649
- Inturrisi CE, Verebey K: The levels of methadone in the plasma in methadone maintenance. Clin Pharmacol Ther 1972; 13:633– 637
- Kreek MG: Plasma and urine levels of methadone. NY State J Med 1973; 73:2773–2777
- 7. Verebey K, Volavka J, Mule S, et al: Methadone in man: pharmacokinetic and excretion studies in acute and chronic treatment. Clin Pharmacol Ther 1975; 18:180-190
- 8. Inturrisi CE, Verebey K: A gas-liquid chromatographic method for the quantitative determination of methodone in plasma and urine. J Chromatogr 1972; 65:361–369
- 9. Blake DA, Distasio C: A comparison of levels of anxiety, depression, and hostility with methadone plasma concentration in opioid dependent patients receiving methadone on a maintenance dosage schedule, in Proceedings of the Fifth National Conference on Methadone Treatment. New York, National Association for the Prevention of Addiction to Narcotics, 1973

Book Forum

Nancy C. Andreasen, M.D., Ph.D., Editor

BRAIN AND BEHAVIOR

Principles of Behavioral Neurology, edited by M. Marsel Mesulam. Philadelphia, F.A. Davis Co., 1985, 405 pp., \$55.00.

Behavioral neurology is the specialty of neurology that focuses on the neuroanatomical basis of behavior or brainbehavior relationships. Because of this behavioral focus, it is not surprising that behavioral neurology has fostered the growth of the borderland between psychiatry and neurology. The relevance of behavioral neurology to psychiatry and psychology is highlighted by the association of mood alterations with the cerebral location of strokes, the capacity for temporolimbic epilepsy to produce classic psychiatric symptoms and atypical presentations of psychiatric disorders, and the appreciation of the dramatic impact of right-hemisphere language disorders on affect and interpersonal skills. Familiarity with behavioral neurology should be of prime importance to psychiatrists and psychologists concerned with the biological basis of psychiatric disorders.

Dr. Mesulam is one of the country's foremost behavioral neurologists; he is on the faculty of Harvard Medical School, is Director of the Section of Neuroscience and Behavioral Neurology at Beth Israel Hospital, Boston, and is head of the Bullard and Denny-Brown Research Laboratories. He is also a recipient of the Javits Neuroscience Investigator Award from the National Institute of Neurological and Communicative Disorders and Stroke and of a McKnight Director's Award. He and 12 other respected contributors have written 11 chapters on some of the important principles and topics in behavioral neurology.

Chapter one reviews the neuroanatomical foundation and basic principles of brain-behavior interrelationships. Chapter two discusses the mental status examination and various higher cortical or cognitive functions. Chapter three discusses the biology of attention and its disturbances and chapter four the amnestic disorders and memory. Chapter five reviews the aphasias and related disorders of the left hemisphere, and chapter six presents the language disorders of the right hemisphere. Chapter six should be of special interest to psychiatrists because of the relationship of righthemisphere language disorders to interpersonal interactions. Chapter seven presents the disorders of complex visual processing. Chapter eight discusses ictal and interictal behavioral manifestations, diagnosis, and management of temporolimbic epilepsy. Chapters nine through eleven review recent advances in the application of evoked potentials and neuroimaging to behavioral disorders.

Chapters one, three, five, six, and eight are particularly good and particularly relevant to psychiatry. Chapters on less familiar topics may be slow reading for nonbehavioral neurologists. Overall, I highly recommend this text to all psychiatry residents, psychiatrists, and psychologists with a serious interest in the biological basis of psychiatric disorders.

NANCY J. MINSHEW, M.D. Pittsburgh, Pa.

Two Hemispheres—One Brain: Functions of the Corpus Callosum, edited by Franco Leporé, Maurice Ptito, and Herbert H. Jasper. New York, Alan R. Liss, 1986, 540 pp., \$124.00.

This volume contains the proceedings of the Sixth International Symposium of Neuroscience of the Centre de Recherche en Sciences Neurologiques de l'Université de Montréal, Canada, May 16–18, 1984.

This compendium of papers by many of the world's foremost investigators of corpus callosum function is dedicated to Nobel laureate Roger W. Sperry, whose pioneering work with the corpus callosum and its role in integration of the separate behavioral and mental functions of the two hemispheres has been inspirational to all neuroscientists.

The chapters are presented in six topical sections. First, very fittingly, the introductory section consists of two chapters by Roger Sperry himself and one of his collaborators, neurosurgeon Joseph Bogan. Patients of Joseph Bogan and his associate, Philip Vogel, suffered from severe, intractable epilepsy and underwent commissurotomy to gain better control over seizures. It was through working with these patients that Sperry, along with a number of his students, was able to extend his studies of split-brain animal preparations to man.

Both chapters deal with some of the practical yet philosophical questions of consciousness and personal identity of the two hemispheres when they are in their connected or disconnected states. Their functional independence and interdependence in making up one brain through their commissural interconnections are discussed as well.

Following the introduction, the five remaining sections deal with gross and microscopic anatomical considerations, electrophysiological investigations, and animal investigations. The final two sections consider human neuropsychology studies regarding callosum function and intrahemispheric and interhemispheric functions and related topics.

It is obvious that these scientists are both serious and enthusiastic about their investigations and appreciate the necessity of interdisciplinary and multidisciplinary perspectives. They have shared and continue to share their findings with their fellow investigators.

There is no question that reading this book develops a sense of awe and wonderment at the complexity of issues that these investigators are just now beginning to come to grips with in studying interhemispheric communication. They are not afraid to expand their horizons and develop new experimental strategies. The result is a multifaceted exploration, combining anatomical, physiological, developmental, and neuropsychological techniques. It is ε significant contribution to a better understanding of the corpus callosum, the most complex of organs.

This book as a whole most certainly is meant for the serious neuroscientist who has an interest in the whole field of hemispheric specialization and the role that forebrain commissures play in interhemispheric information transfer and integration. It does not appear to be intended for the novice to neuroscience research, especially since, as Karl

Pribram states in the final chapter, "the flow of data is almost inundating." Nonetheless, the introductory chapters and the sections on human neuropsychology are of value to all clinicians and researchers interested in the area. Psychiatrists should become increasingly interested as we begin to return more squarely to our roots in nineteenth-century "brain science" and as we become more keenly attuned to the need to correlate brain structure and physiology with the behavior of our patients.

VICTOR SWAYZE, M.D. Iowa City, Iowa

Artificial Intelligence and Psychiatry, by D.J. Hand. New York, Cambridge University Press, 1985, 266 pp., \$39.50.

The first and last sentences in this book imply a persuasive logic, but it may not be easily adopted. The first-"The last few years have witnessed a dramatic increase in the availability of computers" (p. 1)—appears an unchallengeable statement. (It may be interesting, however, to speculate on how many psychiatrists have acquired a computer.) The final sentence, which quotes Sloman (1)—"Within a few years . . . psychiatrists, and others, will be professionally incompetent if they are not well-informed about these developments" (p. 242)—is certainly a challenging statement. "These developments" refer to advances in the field of artificial intelligence and, in particular, to their relevance for psychiatry. It has, indeed, been a "few years" since Sloman issued his challenge and upwards of 2 years since Hand chose to close his book with it. If one accepts Sloman's and Hand's views, the current degree of professional incompetence in psychiatry is gargantuan. But are these views valid? Does artificial intelligence have a relevance for psychiatry? Does the clinical psychiatrist need to know about artificial intelligence? What is artificial intelligence?

After presenting a series of unitary definitions of artificial intelligence, Hand gives us a helpful dual definition: "To model the way the human mind works ... or ... to build a system which behaves intelligently, regardless of the mechanism by which it does this" (p. 3). He is thus at pains at the very beginning of his book to separate the domain of artificial intelligence from that of computers in general. Sloman's concept of professional competence does not involve a knowledge of accounting systems or the editing delights of word processing, useful as these may be. Rather, it implies an interest in the simulation of cognitive processing to test psychological and psychiatric theories or the ultimate use of computer systems that can accurately and reliably diagnose psychiatric disorders and articulate comprehensive management plans. Hand's book aims (according to the preface) to introduce artificial intelligence to the psychiatrist 'with no knowledge of computers" (p. ix), and this it achieves admirably. Many articles and books on artificial intelligence are inaccessible to the uninitiated, peppered as they are with programming languages or the formulae of formal logic. Hand, keeping these to an essential minimum, guides us through some of the necessary underlying concepts of artificial intelligence with relative ease, so that the major sections of the book-on computer-assisted diagnosis and the simulation of some aspects of the mind-can be read with pleasure and understanding.

Although it may be somewhat manipulative to suggest it, psychiatrists who read Hand's book will have proceeded well along the path toward Sloman's concept of professional

competence. They will have been introduced to various forms of knowledge representation, including the formidable (to me) formal logic of propositional and predicate calculus, semantic networks, frames, and scripts. Although the terms may be new, the ideas they are used to convey often create a sense of dejà vu. Possibly they can be compared with the rules of the grammar of our first language, rules that are "known" so as to enable us to utter grammatical sentences but available (if then) only to the consciousness of committed linguists. Could it be that some of the concepts underlying artificial intelligence possess a psychological reality that triggers this dejà vu?

The chapter devoted to "Machine Understanding of Natural Language" examines one of the major fields of artificial intelligence and introduces the reader unfamiliar with the psycholinguistics revolution to transformational grammar and augmented transition networks. These are awesome terms but are presented in this book as readable and understandable theories of syntax and semantics, the stuff of our routine speech and thought. Hand presents three arguments for the relevance of this aspect of artificial intelligence to psychiatry: 1) as a "window on the mind" (p. 72) with special relevance for an understanding of the interactions of the clinical interview, 2) as fundamental to our understanding of natural human intelligence, and 3) for the application of computers to clinical interviews. I dispute Hand's claim that the "problems of language comprehension and generation are the same as the problems of intelligence. Solve one and we have solved the other" (p. 72). His second argument is too global; language is but one aspect of cognition and intelligence, albeit a major one. The psychological and neurochemical processes underlying or mediating "language" may not necessarily be similar to those of other cognitive (and intelligent) faculties.

By far the major section of Hand's book (84 pages) is devoted to computer-assisted diagnosis. Early in the section, he introduces a concept of artificial intelligence with particular relevance for psychiatry: well-structured problems versus ill-structured problems. For most clinical psychiatrists the term "ill-structured problem" must strike a familiar chord. Perhaps for psychiatrists more than for most clinicians, the problems they face are "ill-structured." This undoubtedly helps to explain some of the poor reliability in psychiatric diagnosis. It seems intuitively obvious that computers could only be of help in this situation.

Flow chart and hierarchical methods, such as CATEGO and DIAGNO, are reviewed; these seem often to be unwieldy and resistant to easy modification. "Expert systems" are preferable, and two main approaches are discussed—those which attempt to model putative human diagnostic reasoning and those which apply statistical rules to databases. Examples of the former are provided: MYCIN (for the diagnosis and treatment of infections), INTERNIST (for diagnosis in general internal medicine), CASNET (within the limited domain of glaucoma), and PUFF (for the diagnosis of pulmonary function disorder). The development of expert systems is time-consuming. For example, PUFF, a small but highly accurate expert system that uses part of the MYCIN system, took 50 hours of pulmonary physicians' time and 10 man-weeks of computer engineers' time to encode its 55 roles.

The section on empirical statistical methods will be familiar to those who have struggled with discriminant analysis as a procedure for separating and possibly defining diagnostic groups. This is a well-written, clear section, reflecting the author's interest in the area (he has written a book entitled

Discrimination and Classification [2]). Hand clearly recognizes the objectivity of this method as a basis for expert systems, but he acknowledges the relative conservatism of medical practitioners (including psychiatrists) who may prefer the less accurate but decidedly anthropomorphic system. Citing Michie (3), Hand says they may be like the chess masters consistently beaten by a computer who complained of "their opponents' bizarre and counterintuitive style" (p. 206). Perhaps compromise is the answer, and Hand predicts that future expert systems will use a combination of methods.

In the penultimate chapter, brief mention is made of computer-assisted teaching but no attempt is made to evaluate its effectiveness or its current usage. The application of artificial intelligence to the simulation of cognitive processes is covered by way of a fairly brief review of PARRY, psychiatrist Kenneth Colby's by now well-known representation of a 28-year-old male paranoid patient. In 10 "interviews" by five psychiatrists with either PARRY or a real patient, there were five correct and five incorrect identifications—demonstrating that these clinicians were unable to distinguish the simulation from the real.

Having reached the end of the book, we are now on the path to Sloman's concept of professional competence. I agree with him (and Hand) in principle, but I would question the time span. Although computing technology, hard and soft, is being developed with dazzling speed (and possible acceleration), and the young handle computer games with dexterity, if not understanding, it may be a generation or two before psychiatry incorporates artificial intelligence into its corporate personality and cognitive style. But the warning is there, not so much for today's practicing psychiatrists as for psychiatric researchers and, especially, medical educators charged with designing tomorrow's undergraduate and postgraduate curricula: omit artificial intelligence at the risk of promoting professional incompetence.

REFERENCES

- Sloman A: The Computer Revolution in Philosophy: Philosophy, Science and Models of Mind. Atlantic Highlands, NJ, Humanities Press, 1978
- Hand DJ: Discrimination and Classification. New York, John Wiley & Sons, 1981
- Michie D: In defense of chess programming. British Computer Society Specialist Group on Expert Systems Newsletter 1982; 6:17–18

RODNEY MORICE, M.D. Newcastle, New South Wales, Australia

SCHIZOPHRENIA

Towards a Comprehensive Model for Schizophrenic Disorders: Psychoanalytic Essays in Memory of Ping-Nie Pao, M.D., edited by David B. Feinsilver. Hillsdale, N.J., Analytic Press, 1986, 389 pp., \$39.95.

The revered central figure of many training programs in psychiatry used to be a psychotherapeutically oriented clinician who could talk with schizophrenic patients. Trained in a variety of psychoanalytic approaches, he or she was most effective in a case conference before an assembled group of trainees for whom an interview with a deranged schizophrenic patient was shown to be a meaningful communication between two human beings. These clinicians' principal

tool was a finely tuned ability to identify and address the emotional elements of the patient's highly symbolic and often incoherent language. These figures have largely disappeared in the last decade and have not been replace. Their legacy has never been fully examined, perhaps because it recalls their often vociferous opposition to the neuroleptics, whose efficacy in the treatment of the grosser's gns of psychosis relentlessly overwhelmed their more modest therapeutic successes. Many biologically oriented clinicians today would eschew the rehashing of the drugs versus psychotherapy debate, however, in recognition of the limitations of drug treatment in restoring features of the patient's personality and in hopes that the psychoanalytic perspectives of these great figures might still contribute uniquely to the understanding or treatment of schizophrenia.

Dr. Ping-Nie Pao, Director of Psychotherapy at Chestnut Lodge until his death, was such a figure. This book by some of his colleagues across the world arose from a conference held in his memory, which aimed at an assessment of psychoanalytic treatment of schizophrenia. The book encompasses contributions by 12 psychoanalytic psychotherapists and additional related chapters from other persi ectives. Its goal is to provide a comprehensive psychoanalytic model for schizophrenia. Two particularly noteworthy chapters are by the editor, David Feinsilver, who is a staff psychiatrist at Chestnut Lodge. Dr. Feinsilver points out that the unique, self-chosen task of psychoanalytic psychotherapy o schizophrenia is the fashioning of "a new stronger self" a ter "the catastrophe of a schizophrenic breakdown." He sives an example of his approach in a moving description of the treatment of a young schizophrenic man. The account is reminiscent of the case conferences of yore recalled above. The meaning of the patient's regressed behavior becomes clear to both the patient and the therapist after the therapist first discovers the significance of his own emotional reaction to the patient. This clarification of the symbolic meaning of the regression through the analysis of the counter ransference is as fresh and dramatic today as it was decades ago, but it itself calls for critical analysis.

Is this explication of the meaning of the regression ultimately of value for patients? Do they benefit from the insight achieved or the human bond made between themselves and the therapist? Dr. Feinsilver does not answer this question, but he poses the problem involved with some clarity. He points out that reliance on "conflict oriented psychoanalytic psychotherapy alone leads to a fantasy oriented set, which may seem to be relating its innermost wishes quite intimately towards the object, but will completely fail to app y this to the realities of daily life." Success of such therapy may "disintegrate upon the slightest encounter with the outside real world in a sense of real separateness, such as after a brief separation from therapy." On the other hand, supportive therapies, in which he includes vocational therapy, social skills training, and family therapies, "alone are in idequate because they focus on repair of the broken self, as d ignore the underlying vulnerable self rooted in the fantasies from the past."

No reasonable person could argue with Dr. Fainsilver's call for integration of these two approaches. However, the comparison between psychoanalytic and supportive therapies must also acknowledge that tremendous empirical gains are being made in the study of the latter. The work of Leff and Vaughn (1) and others of the British Social Tsychiatry School, for example, has amassed substantial data on the role of expressed emotion in the treatment of families of schizophrenic patients that can now be viewed critically from

a number of perspectives. Interestingly, their work is nowhere mentioned in this book, despite the professed interest of most of the contributors in integrative approaches. This book suggests that no similar effort in schizophrenia can soon be expected from psychoanalysis. Even to the reader historically sympathetic to its goals and methods, efforts seem inappropriately directed away from the study of the patient into metapsychology. It is clear from the first chapter, by Thomas McGlashan, Director of Research at Chestnut Lodge, that quantitative data are not forthcoming. According to Dr. McGlashan, because of inadequate medical records, it is impossible to tell whether patients at Chestnut Lodge improved during their hospital stay and thus to answer the critical question of whether successful psychotherapy improves long-term rehabilitation.

The traditional evidence for psychoanalytic hypotheses is not follow-up studies, however, but well-written single case descriptions. There are only three chapters in this book that present case material from schizophrenic patients in vignettes longer than one paragraph, and none of these describes the outcome of the therapy. One chapter describes the initiation of therapy with a schizophrenic patient and then switches to the successful completion of therapy with a neurotic patient. In the light of the serious challenge raised by Dr. Feinsilver and the lack of quantitative data available, well-described clinical material would seem to be essential to delineate the role of psychoanalytic psychotherapy in recovery of function before proceeding to its conceptualization in metapsychological theories of personality development. However, the majority of the book is given over to such theorizing, most of which attempts to marry a notion of biological vulnerability to psychoanalytic theories developed to deal with borderline personality disorders.

The book contains nice descriptions of biological problems in a chapter by William Carpenter and in another by Clarice Kestenbaum, who summarizes studies of children at risk for schizophrenia. However, the specific features of biological vulnerability described in these contributions are largely ignored and sometimes confused. Most of the effort is spent on speculating about which stages in theoretical schemes of the development of personality are disrupted. The effort is unsatisfying. One of the authors concludes his chapter on schizophrenic thought disorder by saying, "We often see adults with thought disorders who tend to construct overly abstract . . . categories in an attempt to compensate for difficulties at the concrete level of interpreting the meaning of affective events." The same criticism would seem to apply to most of the chapters of this book, which present overly elaborated theories without sufficient clinical material to enable the reader to assess their validity. One is reminded of the comparison of Freud and Breuer by Marks (2) in which Freud was shown to have greater command of the clinical material. The core strength of the psychoanalytic approach, rooted in the detailed knowledge and understanding of individual patients, seems to have been lost to meta-

Ping-Nie Pao's Taoist philosophy held that schizophrenia is ultimately unknowable. However, the process of learning about schizophrenia would seem to be an important measure of the vitality of the ideas of those who would understand and treat it. Psychiatry has relied on psychoanalysis for a description of the intrapsychic experience of mental illness. The critical reading of this book calls the present vitality of that contribution to schizophrenia into serious question unless the issues raised by Dr. Feinsilver can be addressed.

REFERENCES

- 1. Leff J, Vaughn C: Expressed Emotion in Families: Its Signifi-
- cance for Mental Illness. New York, Guilford Press, 1985

 2. Gedo JE, Sabshin M, Sadow L, et al: "Studies on Hysteria": a methodological evaluation. J Am Psychoanal Assoc 1964; 12:734-751

ROBERT FREEDMAN, M.D. Denver, Colo.

Schizophrenia and the Family: A Practitioner's Guide to Psychoeducation and Management, edited by Carol M. Anderson, Ph.D., Douglas J. Reiss, Ph.D., and Gerard E. Hogarty, M.S.W. New York, Guilford Press, 1986, 350 pp., \$26.95.

This is a very valuable book. It is a long-awaited manual that gives a sensible, step-by-step account of a way to manage schizophrenia.

A spectacular feature is that here is a monograph by nonmedically trained people which will please the biological psychiatrist. Here are three psychosocial interventionists who state, "We believe there is a biological basis to many, if not all, of the schizophrenias."

The editors have excellent credentials. All have extensive experience, and Anderson and Hogarty have made influential contributions to fine journals. They believe in the "attention-arousal" model of schizophrenic pathophysiology. They advocate the use of antipsychotic medication and treatment in the family setting. Every effort is made to avoid overstimulation from external or internal stimuli. In the initial stages the family is encouraged to provide a low-key but not permissive environment to assist in "buying time . . . during which the patient may be able to become more tolerant of stimulation and the normal demands of life.' Clinicians help families and patients to agree on priorities and to translate them into small achievable tasks. The aim is to steer an even course between too much and too little stimulation and arrive at social and vocational rehabilitation and, possibly, termination of therapy. The clinician is to set limits, be supportive, give constructive advice and structure, and avoid focusing on insight, dynamics, and interpretations. A central feature is education of the patient and family.

The book begins with a chapter entitled "Background and Rationale." The first part, which is a little stiff, touches on the need for new treatments and states, "Our collective guilt allows no alternatives." Then come a few closely argued pages. As the chapter closes, the reader is left a little unclear about what is going to happen next. Apparently the book is a manual which is used in the execution of NIMH grant

MH-30750. The final results of the study are not yet at hand. The second chapter, "Connecting With Families," describes getting families (often disillusioned) to cooperate. It contains the first of the many illustrative dialogues liberally sprinkled through most of the rest of the book and is packed with good advice.

The third chapter describes an educational workshop for family members. It provides an account of the "attentionarousal" model and a comprehensive list of topics and information to be transmitted. The detail is perhaps a little too complete, but that is of no concern. One of the few slips in the book occurs here: "It is the disturbance in neurotransmission that has given rise to many explanations of severe mental illness such as schizophrenia." I assume that this is in

fact a slip and not a sly dig at those with an exclusively dynamic approach.

The fourth chapter deals with the schizophrenic patient's first year out of the hospital. It includes a stack of good, useful information. The authors contentiously advise the clinician to "always assume responsibility for tasks that have failed" and to be always available.

The fifth chapter deals with social and vocational rehabilitation. The sixth chapter is entitled "The Final Stages of Treatment." The last chapter deals with practical issues in the "Implementation of a Psychoeducational Model." The authors make the point here that most psychiatric systems do not emphasize the importance of sustained contact with patients and continuity of care. Advice is given on training staff and avoiding burnout.

The book uses new terminology. "The psychoeducational model" is shorthand for the coupled educational workshop and supportive/directive style of family intervention, in which overstimulation is avoided and small steps toward recovery are negotiated. (It remains to be seen whether this model will give rise to a similarly captioned movement.) The term "clinician" is used throughout—only on page 45 is the term "therapist" accidentally used.

There is frequent repetition of the basic principles. This is helpful. At the end of more than 300 pages of text (many with transcripts of interviews), one is thinking in the style recommended by the authors.

Whatever the outcome of NIMH grant MH-30750, this book contains a very sound and responsible approach. It should be read by every clinician who is serious about schizophrenia.

SAXBY A. PRIDMORE, F.R.A.N.Z.C.P.

Hobart, Tasmania, Australia

The Language of Psychosis, by Bent Rosenbaum and Harly Sonne. New York, New York University Press (Columbia University Press, distributor), 1986, 137 pp., \$32.00.

Speech behavior can be massively altered by schizophrenia. Is there a pattern to these alterations? If so, does this pattern say anything of consequence about the nature of schizophrenia? The authors (a Danish psychiatrist and a Dutch linguist) try to give affirmative answers to both of these questions by invoking structural linguistics, with a heavy emphasis on Jacques Lacan.

In the Lacanian tradition, the prose of this book tends toward considerable prolixity. Here are a couple of examples:

This is because the subject-who-is-supposed-to-know always appears in the form of a repetition in the transference relation and because the language that is articulated in the subject-who-is-supposed-to-know is already there before the individual's speech. (p. 36; italics in original)

As the repression of the body proper-body of the other structure is already connected with the functions of the rank-and-file signifiers, in schizophrenia the signifier of the signifiers must have become the object of a kind of prerepression. (p. 101)

What ultimately anchors this effusiveness is the uniqueness of the authors' primary data—transcriptions of schizophrenic speech and actual writing dating from the 1890s to

the present. These texts reflect the extraordinary suffering and inner chaos of schizophrenic individuals. Here are two examples:

Interviewer: Don't you feel yourself alive?

Patient: Well, Ye-es, they ... vicar's wives are alive.

Interviewer: But you? Patient: It's the skin.

Interviewer: ... as a person you are alive?

Patient: N-no. I don't know what that is. It can, it doesn't exist, there are no people in it. They have slid out. There was a gentleman in there, and that gentleman slid out, I believe it was yesterday or the day before. (p. 43)

Dear Servants:

I cannot get any peace in this institution because of nurse A's gentle care. Her mild eyes persecute me day and night. Can you not take me to a rough place? I would prefer to go the following way: twenty stabs in the stomach (big and small), clinical treatment fron Dr. Brunnicke (suicide) (anticlinical), active service, being drilled through the back hole and up out through the front passage with sword, then crucifixion to a tree. (p. 71)

Ironically, examples of schizophrenic language such as these provide, for me, the most specific and revealing pictures of what schizophrenia is about and what the authors are getting at. The following is a rough breakdown o what I interpret to be their main points.

- 1. When the schizophrenic patient speaks, the sense of a first person, an "I," who is doing the talking (or waiting) is weakened. As a result, others are often represented as governing the expression of speech.
- 2. The otherness of schizophrenic language reflects the intrusion of the Lacanian other—the unconsciously organized discourse register of signifiers—into the flow of speech.
- 3. When the Lacanian other breaks through the enunciation, the resulting disjunctions are symbolically represented as a dismembered, imaginary body (see the "Dear Servants" extract quoted above).

I fully agree with the authors on point 1 and have argued for a similar point of view on the basis of empirical studies of verbal hallucinations in schizophrenic patients (1). However, points 2 and 3 are riskier claims. Both are developed on the basis of juxtapositions of different, carefully selected segments. It is easy, on the basis of selected data of this sort, to make a case for just about anything. What then actually constitutes data that support a particular, psychoanalytically formulated position? One type of confirmation would be if a particular formulation led to efficacious therapeutic interventions that would not be obvious in the absence of the formulation. Although there is some description of therapeutic technique in the last chapter of this book, these descriptions are quite sketchy and focus on the ability of the therapist to emerge as an other—in the conversational sense, to become a second person—who eclipses the unconscious self-generated other. A simpler reformulation of this process is that a useful preliminary goal in treating schizophrenic patients is to somehow become a real person for them to talk to. One does not, however, need concepts like discourse registers and imaginary bodies in order to figure ou. that this is a good thing to try to achieve.

Nonetheless, the hypothesis developed in this book raises a critical question: Does the peculiar weakening of the first-person "I" in schizophrenic speech and writing primarily reflect a linguistic process run amok? Or do these bizarre and unsettling locutions—of selves sliding out of bodies and the possession of minds by aliens—reflect well-formed, appropriate linguistic representations of certain unusual experiences? I would favor the second explanation over the first, while admitting that the first explanation has not been ruled out.

REFERENCE

 Hoffman RE: Verbal hallucinations and language production processes in schizophrenia. Behavioral and Brain Sciences 1986; 9:503-548

RALPH E. HOFFMAN, M.D. New Haven, Conn.

PANIC AND ANXIETY

Anxiety, by Donald W. Goodwin. New York, Oxford University Press, 1986, 226 pp., \$17.95.

Here is a small book on the subject of anxiety disorders for the nonprofessional reader. There are quite a few books of this sort on the market, reflecting the recent popularity of the topic. Examples include The Anxiety Disease and How To Overcome It (1), Living With Fedr (2), Panic: Facing Fears, Phobias, and Anxiety (reviewed below in this issue of the Journal), and Anxiety and Its Treatment (3). Goodwin's book differs from this group of self-help manuals to some extent. It is a concise reference intended for anyone with an interest in these illnesses who is seeking basic medical information. The book is not specifically directed toward persons with anxiety disorders, although such persons could benefit from reading it.

Anxiety is delightful reading. The author has a pointed style and writes in a clear manner. He makes liberal use of witticisms and humorous anecdotes, making the book fun to read. His criticism of psychoanalysis is scathing, and he dismisses both its theory and practice as lacking scientific foundation. In so doing he conveys the impression that environmental factors have little role in the etiology of anxiety disorders and that psychotherapy has little value in the treatment of them. Concerning these matters the author is, to say the least, outspoken.

Nevertheless, it is refreshing to see a short, readable, and informative source with the basic facts about anxiety disorders from a medical perspective. For the most part it is authoritative and up-to-date, and because it reflects the critical thinking of a research-oriented psychiatrist it underscores the scientific basis of psychiatry. For the general public this is an important message. People need to be educated to the fact that psychiatric diagnosis and treatment are based on accumulated data in which patients and families can have confidence. In the last section of the book the author indicates the sources of his material and provides further comments. These notes and references are valuable to readers seeking additional information and reinforce the generally thoughtful tone of the book.

REFERENCES

 Sheehan D: The Anxiety Disease and How To Overcome It. New York, Charles Scribner's Sons, 1984

- 2. Marks I: Living With Fear. New York, McGraw-Hill, 1978
- Greist J, Jefferson J, Marks I: Anxiety and Its Treatment. Washington, DC, American Psychiatric Press, 1986

RUSSELL NOYES, JR., M.D. Iowa City, Iowa

Sexual Aversion, Sexual Phobias, and Panic Disorders, by Helen Singer Kaplan. New York, Brunner/Mazel, 1987, 158 pp., \$25.00.

This book, which is based on Dr. Kaplan's clinical experience, introduces the concept that certain physiological or biochemical dispositions toward anxiety represent legitimate focuses of treatment in sexual disorders. The book itself consists of seven chapters. Six of these were written by Dr. Kaplan and cover conceptual and clinical features of abnormal anxiety in sexual disorders, the multiple etiology of sexual disorders, and treatment by behavioral, psychodynamic, and pharmacological means. A chapter by Donald Klein discusses sexual disorders and psychopharmacological medication.

Dr. Kaplan argues not so much for an eclectic as for an integrated approach. She draws specific aspects from psychodynamic approaches, behavioral approaches, and psychopharmacological approaches. Apparently the integration of psychopharmacology in selected cases is a relatively new addition to the sexual therapeutic mix. This book is not intended as a research presentation, although it lays the groundwork from which research programs could be designed. It is smoothly written with appropriate clinical vignettes and is worthwhile reading for those who have a specific interest in the area.

JAMES REICH, M.D., M.P.H. Iowa City, Iowa

Panic: Facing Fears, Phobias, and Anxiety, by Stewart Agras, M.D. New York, W.H. Freeman and Co., 1985, 145 pp., \$21.95; \$11.95 (paper).

Do we really need or want to read another book on panic disorder, phobia, and anxiety? In recent years many publishers and authors have responded to the growing thirst for information on this subject. The results have all too often been disappointing. I procrastinated in starting to read this book, anticipating several hours of hard labor, but I should not have worried on several accounts. My task was an easy one; indeed, it was a pleasure.

This is a very good book. It is targeted toward anxious/phobic patients and their families and toward the busy clinician who wants the facts served up in a palatable form at the end of a busy day at the office. However, the academic researcher will also find many points of interest within its lucidly written pages. Indeed, the discussion of simple phobias is the best written, most approachable, and most sensible I have read for a long time.

One would not have expected less from Dr. Agras. His writing has always been characterized by clarity and lucidity. His work has demonstrated an intelligent evolution in his thinking about phobic disorders over the past 20 years. He is one of the pioneers in research on phobic disorder in the United States and was actively writing about this subject long before it became fashionable. This book summarizes much of

what he has learned during the years of active research and clinical experience with these disorders.

His approach is pragmatic. One feels that the author listens to his patients, observes intelligently, and searches to ever improve our treatments for phobic disorders. One does not sense that he is simply repeating what he and others have found. Rather, the findings have been intelligently processed and are presented with thoughtful and practical integration.

Although the book is called *Panic*, it is chiefly about phobias as isolated symptoms or as complications of other disorders, especially panic disorder. The book has 10 chapters. Chapter one defines the scope of fears, phobias, and panic. Chapter two describes clinical aspects of panic disorder. Chapter three is a fine review of the epidemiology of these disorders. This is followed by two chapters outlining the causes of phobias; these chapters are based on learning theory and the genetic and biological underpinnings of panic disorder.

I was particularly impressed by Dr. Agras's attempts to explain in simple terms (successfully) the complex, very intriguing theories of Prof. Jeffrey Grey on the central role of the septohippocampal region. The casual reader would breeze through this chapter effortlessly, unaware that others have had to struggle to understand such complex concepts.

The last five chapters discuss treatment. The orientation here, as in the rest of the book, is multidimensional. The simple message is that treatment using a combination of methods is more likely to be successful than an approach that is doctrinaire in its adherence to one solution. Dr. Agras succeeds in conveying that such an approach is born of long practical experience. Different patients need different "doses" of each treatment method, but the clinician most likely to succeed is the one who is equipped to implement all the approaches while tailoring the "dose" of each to the person he or she is helping.

Agras suggests that simple phobias (those occurring in the absence of unexpected panic attacks) usually respond to exposure behavior treatments alone, while phobias occurring in the context of panic disorder respond best to a combination of drug treatment and exposure behavior therapy. He then devotes an entire chapter to the importance of other ways of supporting the sufferer. "Not only should the focus be on the whole patient, but also on the whole environment of the patient, of which the family is one of the most important aspects" is a statement that characterizes his approach.

In the acknowledgments, Dr. Agras states that "there will be general agreement with many of the propositions put forward here, although there will also be disagreement with some of the details." It is certainly true that none of us has a monopoly on clinical insight. I did have reservations about some statements, such as "Understanding the chemical workings of the brain will not result in better counselling for the phobic," "The higher mortality rate in panic patients is due to a single cause—an excess of cardiovascular deaths," and "Fear and anxiety are not, of course, felt in the brain." I also have reservations about Agras's statement that patients with panic disorder and normal control subjects have proportional increases in reported anxiety and heart rate in response to lactate infusion.

Finally, in several places the author comments that a panic attack may be a manifestation of separation anxiety. Although this is a widely repeated view, I think it is just as likely that separation anxiety is merely a cognitive elaboration on or complication of having a panic attack—especially in panic disorder. Alternatively, panic attacks and separation

anxiety may be expressions of more fundamental. shared biological underpinnings. That adult agoraphobic syndrome, panic disorder, and separation anxiety disorder of children should be considered distinct clinical disorders has always puzzled me. I believe too much primacy has been given to separation anxiety in panic disorder and agoraphobia in adults and children when it may really be only a secondary complication or expression of an unexpected anxiety attack. Separation anxiety as a normal developmental phase may well be a separate phenomenon from separation anxiety disorder and agoraphobic anxiety, although they share some common ground.

The physical shape of this book and the cover design will not win many prizes and may well result in some lost sales. These design deficits do not do justice to the quality of the book's contents. Indeed, this is one of the better examples of not being able to judge a book by its cover. In any event, all of these are but small quibbles in the face of what is a very fine contribution by Dr. Agras.

I have no doubt that patients and their families will find comfort and sensible explanations in the pages of this book. It will guide them in their quest for effective treatment. Clinicians will find it helpful to recommend to their patients as a reflection of what psychiatry has to offer. The clinician should find it useful in enhancing the patient's compliance in following through with treatment.

DAVID V. SHEEHAN, M.D. Tempa, Fla.

NEUROPHARMACOLOGY

The Biochemical Basis of Neuropharmacology, 5th ed., by Jack R. Cooper, Ph.D., Floyd E. Bloom, M.D., and Robert H. Roth, Ph.D. New York, Oxford University Press, 1986, 393 pp., \$16.95 (paper).

Less is more. Few if any general books on the nervous system are in the under-one-inch-thick category. This book is attractive for the novice because it is underwhelming. It is also readable and authoritative. The book's major strength continues to be its chapters on the specific transmitters (amino acids, acetylcholine, catecholamines, and serotonin). This fifth edition provides new sections on molecular neurobiology and modulation of synaptic transmission, both welcome additions that are well-done. The emphasis on generalities is appropriate, but these principles could receive valuable reinforcement from much-needed simple drawings or diagrams, which are rather sparse in this book. It is recommended reading for undergraduates and hospital residents who need to know some general principles of neurochemistry. Graduate students will require more specific information, and this book provides good general references for additional details.

PHILIP SEEMAN, N.D., PH.D. Toronto, Ort., Canada

Diagnosis and Psychopharmacology of Childhood and Adolescent Disorders, edited by Jerry M. Wiener. New York, John Wiley & Sons, 1985, 373 pp., \$34.95.

The introduction of the neuroleptic drugs in 1952 and the antidepressant medications a few years later has had a major

impact on research and practice in adult psychiatry. The introduction of lithium provided a drug effective not only in the active phase of a disorder but one that exerts a prophylactic effect on the development of subsequent episodes.

The use of psychopharmacological agents with children actually predates these developments in adult psychiatry by several years if one considers Dr. Bradley's classic work in the late 1930s with stimulants as the beginning of modern pediatric psychopharmacology. Nevertheless, neither practice nor research in the psychiatric disorders of childhood has been as affected by the use of psychotropic medications as it has been in adults. There are multiple reasons for this which have been outlined elsewhere (1).

Nevertheless, there has been a growing body of research in pediatric psychopharmacology since at least the 1970s. The revised version of Dr. Wiener's earlier book, *Psychopharmacology in Childhood and Adolescence* (2), gives strong support to the view that pediatric psychopharmacology is coming of age. This is a thorough revision of Dr. Wiener's previous book. It begins with Wiener and Jaffee's historical overview of child and adolescent psychopharmacology. They take us through the 1930s, the 1950s, the use of the stimulants in the 1960s, and conclude with 1970 to the present, including an up-to-date summary of various areas.

Dr. Theodore Shapiro, himself a pioneer researcher in the field in conjunction with others at New York University, under the original leadership of Dr. Barbara Fish, contributes a chapter on developmental considerations in psychopharmacology. He looks at the interaction of drugs and development and points out that the use of a drug to treat a symptom without understanding the possible etiologies of the disorder in developmental terms is poor clinical practice and also flies in the face of developmental considerations that guide the work of child psychiatrists.

Another pioneer in the field of pediatric psychopharma-cology research, Keith Conners, contributes a very cogent chapter on methodologic and assessment issues in pediatric psychopharmacology. He covers issues of design and subject selection, including a discussion of the categorical DSM-III and dimensional methods of diagnosis. Important issues of compliance, drug plasma levels, dosage, setting variables, dependent variables, and statistics, as well as ethical issues, are covered in a very systematic fashion characteristic of Dr. Conners's own work. The book ends with a chapter by the editor summarizing the various chapters and outlining prospects for the future.

The other eight chapters, which make up the bulk of the book, are concerned with specific disorders. Magda Campbell, another of the New York University group who have contributed so much to pediatric psychopharmacology, gives an up-to-date overview of the treatment of pervasive developmental disorders, infantile autism, and the schizophrenic disorders in childhood and adolescence. The section on untoward effects of neuroleptics should be read by anybody who considers the use of neuroleptics for any condition in childhood.

Puig-Antich and his colleagues, Ryan and Rabinovitch, cover current knowledge about the treatment of affective disorders in childhood and adolescence. At this point, we do not have the placebo-controlled studies that would support the use of either monoamine oxidase inhibitors, tricyclics, or lithium in the treatment of affective disorders in prepubertal children and, indeed, in adolescents analogous to the way they are used in adults. Reasons for this apparent lack of response comparable to what is seen in adults with affective disorders are still unclear. Particularly valuable is the discus-

sion of the psychopharmacologically nonresponsive child with an affective disorder. Developmental evidence suggests that the affective disorders in prepubertal children and adolescents can be quite malignant. Long lengths of episode, relative nonresponse to antidepressant medication, and high rates of relapse suggest that these disorders may interfere considerably with normal development. Thus, the search for effective treatment—psychopharmacological and other—is a key issue for future research.

We probably know more about the treatment of attention deficit and related disorders with stimulants and other medications than we do about any other particular disorder. Thus, it is not surprising that Donnelly and Rapoport's chapter contains probably the most useful clinical data, based on sound research and provided in a very comprehensive but succinct fashion. Still to be demonstrated is whether the psychopharmacological agents in combination with other types of intervention significantly alter the long-term outcome of these disorders in childhood. How long children should be treated with what combination of interventions is a major area for future research.

Probably less is known about the treatment of anxiety disorders with psychopharmacological agents than any other area in child psychiatry. Jaffee and Magnuson cover what is known in crisp fashion, but it is clear that much more research, including better definitions and better measurements of core dimensions, is needed in this area.

Gerald Young and his colleagues from Yale provide a succinct overview of what is known about the treatment of Tourette's disorder and other tic disorders. The discussion of a comprehensive treatment package, including monitoring, reassurance, academic intervention, and genetic counseling as well as pharmacological treatment, is a highlight of this chapter. Multiply handicapped patients with Tourette's disorder are also covered in this chapter; child psychiatrists often see such patients.

Next to the anxiety disorders, we probably know less about psychopharmacological treatment of conduct disorders than any other. O'Donnell's chapter summarizes what is known and concludes that there are really no straightforward guidelines which can be given to the clinician for the pharmacological treatment of conduct disorders. Past literature is not as useful a guide as it could be because of the different ways individuals have diagnosed and classified conduct disorder and the different flaws in design in the studies that have been presented. Since conduct disorders contribute disproportionately to the social pathology and psychopathology of adult life—probably more so than any other childhood disorder—it behooves the field to systematically research effective intervention with this group of disorders.

Hendren's discussion of the drug treatment of eating disorders highlights the early stages of research in this area. These disorders may be increasing in prevalence, and it is vital to know which patients may respond to which types of medication and what the pros and cons are of different types of psychopharmacological agents in the treatment of eating disorders.

Shaffer and Ambrosini conclude with a thorough discussion of drug treatment of enuresis and sleep disorders. Their practical guide to the treatment of enuresis, including nonpsychopharmacological management, is a welcome addition to this book.

In summary, this book can be recommended to anyone who practices clinical child and adolescent psychiatry. It offers an up-to-date summary and practical clinical guide-

lines. For those interested in a more thorough discussion of assessment instruments useful in pediatric psychopharmacology, the December 1985 issue of the *Psychopharmacology Bulletin* makes a useful companion to this volume. This book is arranged along the lines of the disorders: each chapter covers the treatment of a different disorder with multiple types of psychopharmacological agents. Werry's book (3), which is now out-of-date in some areas, is also useful for the clinician in that it is organized along the lines of drugs: each chapter is written about a different drug and its usefulness in specific disorders. It makes a useful companion to the Wiener volume.

REFERENCES

- Cantwell DP: Use of psychopharmacologic agents with the emotional disorders of childhood, in Clinical Pharmacology and Therapeutics: A Pediatric Perspective. Edited by Mirkin BL. Chicago, Year Book Medical Publishers, 1978
- Wiener JM (ed): Psychopharmacology in Childhood and Adolescence. New York, Basic Books, 1977
- Werry JS (ed): Pediatric Psychopharmacology: The Use of Behavior Modifying Drugs in Children. New York, Brunner/Mazel, 1978

DENNIS P. CANTWELL, M.D. Los Angeles, Calif.

Chronic Treatments in Neuropsychiatry: Advances in Biochemical Psychopharmacology, vol. 40, edited by Dargut Kemali and Giorgio Racagni. New York, Raven Press, 1985, 219 pp., \$49.00.

This volume covers the waterfront of a great deal of psychopharmacology—both clinical and basic—with blinding speed. The topic is chronic treatments, which means long-term treatment of schizophrenia, affective disorders, and anxiety disorders. Each contribution is brief—usually less than 10 pages—so the reader, in most instances, gets a snapshot view of many complicated, controversial questions. Such a view brings out the weak and strong parts of the field.

The preclinical chapters are the poorest because there just is not that much clear, concise knowledge that can be fitted into a brief review. For example, there are several chapters on the neuroendocrinological aspects of long-term treatment with neuroleptics. There may be a pony in all that research but it is not apparent yet, and the reader is numbed by almost telegraphic recitals of data that do not seem to lead to clear conclusions. Perhaps this is the message, and the reader is well served to see how difficult it is to plow this field. The review by Meltzer, however, is particularly recommended.

On the clinical side, the chapters tend to be more informative, but the soft underbelly of clinical pharmacology is exposed despite attempts to appear definitive. There is a good, very succinct review of tardive dyskinesia by Casey, who tells us that we know very little but that if you keep the dose of neuroleptic at the minimum needed (as if we knew what that was) most patients do not get worse and may improve. Yet, he acknowledges, we are not at all sure that dose is related to tardive dyskinesia. The only treatment that seems validated is neuroleptics, but Casey hardly recommends raising the dose of neuroleptic as a treatment for tardive dyskinesia, unless the dyskinesia is extremely severe and impairs functioning. This sounds like reasonable advice, yet I wish someone would have the chutzpa to test whether

a higher dose would be effective long-term treatment.

Prange whets our appetite with a fascinating review of the effect of the thyroid axis on psychotropic drugs and mental disorders. I hope the reader will be stimulated to pursue this area in the more extensive reviews listed in the bibliography. Here, too, it seems embarrassing that we have not attacked such important questions with adequate research. Does T₃ make imipramine work faster in women with major depression but not in men? Several studies, over 10 years old, have indicated this finding, which has had almost no impact on clinical practice, and no recent research has verified it. If it is true, we are missing something important. Paradoxically, the use of T₃ as a booster to tricyclic antidepressants in patients who do not respond to the latter is a common practice, although, Prange points out, there are no convincing data to support it.

The section on long-term neuroleptic treatment is a bit like Hamlet without the prince. The most interesting aspect of this field in recent years has been attempts to find the right dose. So far it has been shown that lower doses of 'luphenazine decanoate may have fewer long-term bad effects on social adjustment but result in more relapses. Much more research is needed before we can adequately assess the risk-benefit ratio. Not a word about this research is mentioned in this book, however. Instead, we have apodictic assertions by Rápisarda et al., based on anecdotal evidence, that fluphenazine decanoate and pimozide are best for chronic psychosis and bromoperidol is best for acute mania and schizophrenia.

Andreasen neatly summarizes the concept of positive and negative syndromes of schizophrenia, but hers is a very brief description rather than a critical review, especially with respect to the crucial question of whether negative symptoms respond to neuroleptic drugs.

Keller and Prien provide excellent chapters, based on results of important large-scale, multisite studies funded by the National Institute of Mental Health (NIMH), on the course and influencing factors of affective disorders and an overview of drug treatment of recurrent and chronic depression.

Schou, as our magisterial authority on lithium treatment, answers several common questions but leaves us dissatisfied that we did not have time to ask more. On the other hand, Frank and Kupfer lead us to water, enticing us by describing a well-designed experiment comparing drug treatment with psychotherapy in major depression, only to find that they do not have the data yet.

The book ends with an informative set of papers on the long-term use of benzodiazepines, probably the most misunderstood area of psychopharmacology. Marks and Rickels et al. demonstrate nicely that the common opinion of the public and physicians that long-term treatment of generalized anxiety is useless and harmful is wrong. Of course, there should be much more data than we have, but these authors show that long-term use probably helps many people and that the risk is minimal. It seems very clear that tolerance does not develop, and although physiological dependence may occur with therapeutic doses, this is not to be equated with clinical addiction. We need clearer terminology here. Substance abuse or dependence, according to DSM-III, requires that use of the substance interfere with functioning, and it is dependence if, in addition, physiological dependence occurs (tolerance or a withdrawal syndrome). People can be confused when benzodiazepines improve functioning by reducing symptoms of anxiety and yet may cause physiological dependence. This is not substance dependence according to

DSM-III. Actual benzodiazepine abuse or dependence is uncommon and a drop in the bucket compared with the problem of alcohol, cocaine, barbiturates, stimulants, and tobacco. Finally, we learn from Andreali that the French prescribe benzodiazepines four times more often than do the Italians.

I recommend this book to the general psychiatrist who wants an overview without too many details.

ARTHUR RIFKIN, M.D. New York, N.Y.

Manual of Clinical Psychopharmacology, by Alan F. Schatzberg, M.D., and Jonathan O. Cole, M.D. Washington, D.C., American Psychiatric Press, 1986, 268 pp., \$24.00 (spiral-bound).

ECT: Basic Mechanisms (1984), edited by Bernard Lerer, Richard D. Weiner, and Robert H. Belmaker. Washington, D.C., American Psychiatric Press, 1986, 177 pp., \$20.00 (paper).

Somatic treatments for mental disorders have exploded in the past several decades. This remarkable progress in somatotherapy during the past 30–40 years has posed a real problem in the evaluation of therapeutic interventions for both the practitioner and the student. These two volumes represent the clinical (*Manual of Clinical Psychopharmacology*) and basic science (*ECT: Basic Mechanisms*) versions of contemporary views on the expanding field of somatotherapy.

The Manual of Clinical Psychopharmacology, which is intended for clinicians, provides an excellent blending of scientific information with practical clinical applications. Its authors, who are acknowledged experts on psychopharmacology, use their personal assessment of recent developments in the field to provide important and up-to-date material relevant to clinical practice. Their bias is practical rather than academic and brings the facts from this growing field in psychiatry to the clinician in a timely fashion. With the upsurge of interest in new information in psychopharmacology, the idea of creating a quick reference manual for practitioners and those seeking introductory information about psychotropic medication is both relevant and timely. Drs. Schatzberg and Cole have produced a brief, portable, and very readable book at a reasonable price. Although its references, collected at the end of each chapter, are not comprehensive, they are current and important and provide good documentation of the authors' presentation.

The first chapter, "General Principles of Psychopharmacologic Treatment," focuses on basic concepts. Its purpose is to provide general advice on how to select and prescribe psychotropic medications. A summary of the legal and ethical issues that have direct implications for psychiatrists is included. This chapter, like the entire book, is practically rather than academically oriented, and readers should consult the appropriate psychiatric literature for additional views and details.

After a brief chapter on diagnosis and classification, separate chapters address the antidepressants, antipsychotic drugs, mood stabilizers, antianxiety agents, hypnotics, and stimulants. The authors provide truly practical information regarding these many different psychotropic drugs. Each chapter provides a concise general review of a drug class that gives the clinician a better understanding of the recent

developments in the field. Drawing on their clinical experience as well as on the scientific literature, the authors provide usable guidelines for assessing and treating psychiatric patients with medications.

The later chapters provide practical considerations of combination and adjunctive treatments and touch on such diverse topics as the use of psychiatric medications in the emergency room, the pharmacotherapy of chemical dependence, and the use of psychotropic drugs during pregnancy, in children, in geriatric patients, and in medically ill patients. The authors select, appraise, and explain recent advances and trends, adding their personal assessment of these complex issues.

We will specify only some features of the book with which we were particularly impressed and a few minor shortcomings. The authors carefully outline the dosage regimen for each class of drugs. Often they give more than one approach and specify in detail how to start a patient on medication. The authors provide this information not only for commonly used psychiatric medications but also for drugs that have not officially been approved by the Food and Drug Administration (FDA) for psychiatric use. They provide sufficient information that the reader can decide whether to prescribe a specific drug and how to go about it. There is a good and useful index. Although the text is not referenced, a comprehensive suggested reading list is provided for each chapter.

Our criticisms of the Manual of Clinical Psychopharmacology are few. This clinical guide suffers from a problem common to all manuals—namely, how to include all pertinent data in a few pages. Whereas the authors go into considerable detail about finding a dosage regimen, they do not go into similar detail regarding the premedication laboratory workup. Despite this limitation, the manual is valuable and useful for the experienced practitioner and the psychiatrist who wants to update his or her knowledge of practical clinical psychopharmacology.

ECT: Basic Mechanisms presents another side of somatotherapies. This book consists of a review, by more than 50 contributors, of the current status of ECT from the neuroendocrine, neurotransmitter, and neurophysiological viewpoints. The authors of the different chapters are well qualified in their fields, and their writing styles are generally easy to read, given the technical nature of the material. The book is aptly named; the editors have stuck to the basic mechanisms or fundamentals of what is known and not known regarding ECT.

Many of the data are derived from animal studies and are quite comprehensive. More detail is available in the superb listings of current references at the end of each chapter.

Although the editors express the hope that greater scientific knowledge will decrease the public's prejudices toward the treatment modality—a viewpoint that is echoed by the other contributors—only a relatively small part of the book is devoted to clinical issues. The short chapter on psychological aspects is well executed.

ECT: Basic Mechanisms is an excellent reference book for basic science researchers, whether their interests be in the field of neurophysiology, neurochemistry, or neuroendocrinology. It is, however, of very limited value to practicing clinicians and confirms that we do not at the present time know how ECT actually works. Serious investigators of ECT will find that the text suggests different possibilities for clinical and basic science research.

Both of the books reviewed here accomplish their aim. Each contains new and evolving information in a rapidly developing field and brings together in a single work the current state of the art. The Manual of Clinical Psychopharmacology is an excellent, practical, up-to-date resource for clinicians and students seeking information regarding psychopharmacology. We recommend this manual to any interested physician, no matter what his or her specialty, who has little information on the subject and wants to find out how to select and prescribe psychotropic medications. Although general clinicians may be disappointed with the basic science orientation of ECT: Basic Mechanisms, active investigators of the underlying mechanisms of ECT may consider this book a standard text on the subject. It is certainly a necessity

in the library of any department of psychiatry or neuroscience conducting such research. In short, we would recommend the ECT book for medical researchers and basic neuroscience researchers and for practicing psychia rists who have an interest in the basic science foundations of ECT.

DAVID TINGLE, M.D. Gainesville, Fla. A. KENNETH FULLER, M.D. Thom. sville, Ga.

Reprints of Book Forum reviews are not available.

Letters to the Editor

Consequences of Abrupt Reduction of Chronic Symptoms

SIR: Both methylphenidate and imipramine have been used in the treatment of attention deficit disorder, residual type (1, 2). Although the treatment of this disorder is generally considered successful when target symptoms (impulsivity, irritability, restlessness, poor concentration) have been reduced, we wish to call attention to the psychosocial complications that may arise as a result of rapid, pharmacologically induced reduction of symptoms. The following case serves as an example.

Mr. A, a 27-year-old man, met the DSM-III and Utah (2) criteria for attention deficit disorder, residual type, marked by impulsivity, irritability, inattentiveness, and motor restlessness. When treated with imipramine, 250 mg/day, he experienced a marked decrease in target symptoms, and within 10 days of his starting the imipramine regimen, Mr. A and his wife noted a dramatic decrease in domestic violence, hostility, anxiety, and irritability. His attention span lengthened, and he was able to complete household projects that had been left unfinished for years. In his words, "I can never remember feeling so calm"; he had had previous trials of low-dose neuroleptics and benzodiazepines without benefit. The patient, his wife, and the treatment team considered the treatment with imipramine to be successful.

Although the couple were initially "thrilled" with the patient's improvement, they soon began to experience increased marital tension. Before Mr. A began to take imipramine, the couple's primary focus had been on his symptoms. With the initiation of medication and the subsequent amelioration of those symptoms, such a focus was no longer relevant. Historically, the couple had communicated through arguments, affective storms, and, at times, outright physical aggression. On the imipramine regimen, however, Mr. A's mood was less labile and hostile, and his wife began to complain bitterly that she "couldn't get a fight out of him anymore"; she sought marital separation. Outside the home also, Mr. A expressed confusion over his newly acquired ability to "stop myself from hitting people—I have a few seconds now to think before I act."

Thus, although the target symptoms had diminished, Mr. A and his wife did not adjust readily to the change. In the absence of symptoms as a major focus in the marriage, they were disarmed; their accustomed pattern of interaction was disrupted as well.

While it is difficult to extract clinical principles from a single case, we feel that this case highlights the potential for new difficulties in the face of abrupt reduction of chronic symptoms, even if those symptoms are considered pathological by patient and clinician. In attention deficit disorder, residual type, the irritability, impulsivity, restlessness, and inattentiveness are longstanding and may well serve as a core around which personality traits, cognitive style, and social

behavior crystallize. With a rapid change in these "core" symptoms, which have been incorporated into the individual's personality, his or her sense of self and characteristic ways of responding to events and to other people are likely to be challenged. Psychotherapy is indicated as an adjunct to pharmacological treatment in order to address the patient's changing sense of self and to assist in finding new ways to deal with people.

REFERENCES

- Mann HB, Greenspan SI: The identification and treatment of adult brain dysfunction. Am J Psychiatry 1976; 133:1013– 1017
- Wender PH, Reimherr FW, Wood D, et al: A controlled study of methylphenidate in the treatment of attention deficit disorder, residual type, in adults. Am J Psychiatry 1985; 142:547–552

SALLY L. SATEL, M.D. STEVEN SOUTHWICK, M.D. New Haven, Conn.

Neurological Aspects of a Schizophrenia-Like Psychosis

SIR: It has been stated that "research into schizophrenialike psychosis with recognized organic etiologies may eventually help in the understanding of 'true' schizophrenia" (1). With this possibility in mind, I report the following case.

Mr. A, a 22-year-old white man, was referred for study 27 years ago. His failure in college courses a year earlier had led to his withdrawing from school and later joining the U.S. Navy. He had done poorly in naval training, had been hospitalized for bizarre behavior and given a diagnosis of schizophrenia, and had finally been discharged.

Examination showed disorganized speech punctuated by inappropriate bursts of laughter, inability to hold to a sequential line of thought, faulty recall, and impaired abstract intellectual functioning. Mr. A appeared withdrawn, and his affect was quite flat. He reported depressive moods, detached periods in which everything seemed strange and unreal, déjà vu, and occasional hallucinations of hearing voices. There was no paranoia, nor did he have illusions of control.

His past and family histories were not notable except for considerable conflict between his divorced parents and their families. The results of his physical and neurological examinations were normal.

An EEG showed a right temporal and adjacent low frontal focus. Pneumoencephalographic studies showed dilation of the right lateral ventricle and shift of the midline to the left. On repeated trials, the gas could not be dislodged from the dilated ventricle, and follow-up studies suggested its progressive dilation.

Mr. A's neurological diagnosis was temporal lobe syndrome associated with a dilated right lateral ventricle and shift of the midline to the left, caused by an unidentified

ball-valve block of the right foramen of Monro. His psychiatric diagnosis was schizophrenia, acute and undifferentiated.

Neurosurgical exploration showed an enlarged choroid plexus, attached by pedicle to the ventricular wall, that blocked the foramen of Monro. Following successful corrective surgery Mr. A rapidly improved; he has lived a successful life in a competitive field without recurrence of his illness over a follow-up period of 27 years.

Although Mr. A's clinical diagnosis of schizophrenia well preceded the present more rigid criteria of DSM-III, a schizophrenia-like psychosis was independently diagnosed by two distinguished psychiatrists. The case is unique in that it involved a discrete ventricular block mechanism but no intrinsic cerebral pathology aside from a secondary periventricular atrophy. The implications of this finding for modern studies that have identified periventricular abnormalities in schizophrenia are highly suggestive (2).

A flat and blunted affect was an outstanding characteristic of Mr. A. However, one can only speculate about an associated hypofunction of the dorsolateral prefrontal cortex, as suggested by Weinberger et al. (3). Other issues, such as the side of cerebral involvement in schizophrenia, are undecided. Inappropriate laughter, however, has been associated with lesions of the right hemisphere (4).

REFERENCES

- 1. Nasrallah HA, Weinberger DR (eds): Handbook of Schizophre-
- nia. Amsterdam, Elsevier, 1986

 2. Brown R, Colter N, Corsellis JA, et al: Postmortem evidence of structural brain changes in schizophrenia. Arch Gen Psychiatry 1986; 43:36-42
- 3. Weinberger DR, Berman KF, Zec RF: Physiologic dysfunction of dorsolateral prefrontal cortex in schizophrenia, I: regional cerebral blood flow evidence. Arch Gen Psychiatry 1986; 43:114-124
- 4. Ross ED: The aprosodias-functional anatomic organization of the affective components of language in the right hemisphere. Arch Neurol 1981; 38:561-569

ROBERT B. AIRD, M.D. San Francisco, Calif.

More on Cocaine and Panic Disorder

SIR: Drs. Thomas A. Aronson and Thomas J. Craig reported three cases of panic disorder precipitated by cocaine abuse (1). We would like to report another case of cocaineinduced panic disorder.

Ms. A, a 24-year-old sales clerk, complained of panic attacks beginning 4 months before she consulted a physician. The attacks fulfilled all of the DSM-III criteria for panic, with the exception of chest pain or discomfort, and were described as moderate to severe in intensity; they occurred at least four times a week. She also had a 4-year history of drug abuse. She had begun by abusing amphetamines but shortly thereafter began to abuse cocaine, both by "snorting" it and by free-basing. She used cocaine five or six times each week, and on the day of her first panic attack snorted an unusually large dose of "over one gram." This was followed by a severe panic attack. Ms. A then vowed to discontinue cocaine use. In the subsequent 3 weeks, she twice attempted to take very small amounts, but each attempt provoked a panic attack. Since then, she has not abused the drug but continues to have frequent spontaneous panic attacks. There is a strong history of substance abuse in her family, but no history of anxiety disorders in her nine first-degree relatives.

This case report supports the hypothesis that a pharmacologically induced initial or "herald" attack may lead to subsequent spontaneous panic attacks (2). However, it is not clear whether this phenomenon can occur only in predisposed individuals or whether it is a risk for anyone who experiences a pharmacologically induced panic attack.

REFERENCES

- 1. Aronson TA, Craig TJ: Cocaine precipitation of panic disorder. Am J Psychiatry 1986; 143:643-645
- 2. Rosenbaum JF: Cocaine and panic disorder (letter). Am J Psychiatry 1986; 143:1320

ROBERT POHL, M.D. RICHARD BALON, M.D. VIKRAM K. YERAGANI, M.D. Detroit, Mich.

Psychosis in Obsessive-Compulsive Disorder

SIR: I read with great interest the article on obsessivecompulsive disorder with psychotic features by Thomas R. Insel, M.D., and Hagop S. Akiskal, M.D. (1). Follow-up studies of obsessional neurotic patients have revealed that some of these patients may develop schizophrenia, but these findings were questioned by Drs. Insel and Akiskal on the basis of diagnostic issues. They suggested that the psychotic features, if present, are nonschizophrenic in nature and that they represent reactive affective or paranoid psychoses, which are generally transient. However, confusion might arise when the psychotic symptoms become prolonged, as is obvious in the following two cases.

Mr. A was a 39-year-old unmarried man who had had treatment in different hospitals for a classic obsessivecompulsive disorder (obsessions and compulsions relating to sexual matters and sexual organs) since the age of 19; his treatment had comprised a variety of tranquilizers and antidepressants, psychotherapy, ECT, and modified leukotomy. He came to the outpatient clinic with a history of paranoid delusions of a few years' duration: delusions of being followed by a group of people who had drugged him and taken photographs of him in the nude while he engaged in homosexual acts. In addition, he admitted to marked ideas of reference but denied any other psychotic symptoms. He could not be followed up for a long period as he lacked insight and refused to continue in treatment.

Mr. B was a 36-year-old single man who had been treated for a typical obsessive-compulsive disorder between the ages of 20 and 24 but had then developed psychotic features (thought disorder, delusions of being Jesus Christ and ruling the world, auditory hallucinations, etc.) that gradually got worse over the years. He was treated mainly as a schizophrenic patient and gradually developed some degree of deterioration. At his best he was markedly obsessional, had difficulty in making decisions, and needed a long time to complete even simple tasks. Whenever he decompensated, all aspects of his behavior worsened.

In the case of Mr. A, it appears that there was a transition from neurosis to psychosis which occurred when the patient was in his mid-30s, but a possible explanation could be the emergence of a concomitant paranoid disorder.

In the case of Mr. B, 4 years after the onset of obsessive-compulsive symptoms the patient developed a definite schizophrenic illness. Either the former symptoms were the early features of schizophrenia, or a concomitant schizophrenic illness developed in the patient's early 20s.

The association between obsessive-compulsive disorder and psychosis still remains questionable, because the data available are based on studies that had methodological inadequacies (2) or involved only a small number of severely ill, hospitalized patients who do not represent the total population of individuals with obsessive-compulsive disorder. We need comprehensive follow-up studies that use more vigorous methodology and involve larger groups of patients from hospitals and the community.

REFERENCES

- Insel TR, Akiskal HS: Obsessive-compulsive disorder with psychotic features: a phenomenologic analysis. Am J Psychiatry 1986; 143:1527–1533
- 2. Akhtar S, Wig NN, Varma VK: Are obsessionals potential schizophrenics? Indian J Psychiatry 1975; 17(1):22-25

HARI D. CHOPRA, M.D. Melbourne, Australia

Perception of Time

SIR: Dr. Andrzej Kubacki's letter (1) about the article by Michael Alan Schwartz, M.D., and Osborne Wiggins (2) draws attention to time as a "fourth dimension" in the interaction of the individual with his or her environment, imparting "direction to all the ongoing processes within open systems."

This note proposes to recall Paul Schilder's analysis of time 50 years ago, included in his *Perception and Thought in Their Constructive Aspects* (3), in which he brought perceived time into the biopsychosocial model of human experience. In this enterprise, he and his students analyzed perception of subjective and objective experiences among normal, neurotic, and psychotic individuals. He included not only time but body image, motoric and spatial perceptions, and social and cultural ideologies to form his "constructive psychology."

As one of his coresearchers, I wrote a paper in 1938 (4) on how children perceive time: measured first from objective data (physical changes in older persons) and later as a subjective perception. When marijuana use became a clinical problem, I studied distortions of body image and perception of time among users (5) and later studied the same problem among Paiutes in northern California during their peyote religious rituals (6).

Perception of time—whether measured or unmeasured, objective or subjective—is a significant factor in the intertwining of systems that eventuate in the human ego in health and disease. Dr. Kubacki did well to focus attention on it.

REFERENCES

- 1. Kubacki A: Time and the meaning of human experience (letter).
- Am J Psychiatry 1987; 144:693-694
 2. Schwartz MA, Wiggins OP: Systems and the structuring of

- meaning: contributions to a biopsychosocial medicine. Am J Psychiatry 1986; 143:1213-1221
- Schilder P: Mind: Perception and Thought in Their Constructive Aspects. New York, Columbia University Press, 1942, pp 213-232
- Bromberg W: The meaning of time for children. Am J Orthopsychiatry 1938; 13(1):142–147
- Bromberg W: Marihuana intoxication: a clinical study of cannabis sativa intoxication. Am J Psychiatry 1934; 91:303– 330
- Bromberg W, Tranter CH: Peyote intoxication: some psychologic aspects of the peyote rite. J Nerv Ment Dis 1943; 97:518–527

WALTER BROMBERG, M.D. Sacramento, Calif.

Auditory Hallucinations and Subvocal Speech

SIR: Peter A. Bick, M.D., and Marcel Kinsbourne, M.D. (1), reviewed the literature on the relationship between auditory hallucinations and subvocal speech and confirmed that a wide-open mouth precludes hearing voices. They stated, however, that the literature "included no specific or controlled manipulation of this phenomenon" and warned therapists that using their findings for treatment purposes might "deprive the patient of a helpful compensatory device." I first became aware of this phenomenon in 1970 when I read a paper by Erickson and Gustafson (2), "Controlling Auditory Hallucinations." The authors reviewed the seminal work of Gould (3–5) and described their own use of the phenomenon in the treatment of chronic patients, which included paradoxical instructions. They had their clients hum, gargle, or in some other way use their vocal cords.

At that time, I was director of staff development at a large state hospital in Illinois, and I sent a memo to all programs asking for suitable candidates for testing this treatment. The requirements were that the patient admit to hearing voices, express a desire or willingness to learn how to control the voices, and have a psychiatric aide who was willing to accompany him or her to a single-trial learning session. Six patients (four of them women) were identified and seen in 30-minute sessions with their psychiatric aides. Each was told that there was a proven way to gain control over the voices, that this was helpful whenever the voices were bothersome, and that it would require a week's practice in order to be effective. Each was asked to demonstrate several bars of a melody that she or he could hum. They were told that any time they wanted the voices to stop, they had only to hum these several bars. They were told that, like learning to ride a bicycle, the method would work imperfectly at first but would become increasingly more efficient with practice. They were told to "practice" as much as possible whenever they heard voices during the next week. The aide was enlisted as a helper to remind and encourage the patient on a daily basis. Each patient was told that at first the voices would stop but return shortly; soon, a few bars would keep them away for longer periods; eventually, just thinking about humming would be enough to control the voices. Emphasis was put on the patient's being in control. No allusion was made to the notion that a patient creates or causes his or her own voices.

One week later, the patients were reinterviewed, as were the aides. Five of the six reported good to complete control. The one exception was a rather paranoid female schizophrenic patient who said she had not practiced at all because she thought it was "too silly" to work. None of the patients reported any discomfort at being in "control" of the voices. One woman said she now remembered that the only time she had been free of voices in the past was while working in the garden and humming to herself.

Drs. Bick and Kinsbourne may have been overly cautious in their concern about compensatory effects of auditory hallucinations; for many patients, they are simply a nuisance. I might add that there were probably a number of "causal" effects in the trial that I have described: 1) suggestion, 2) the fact that humming precluded hearing the voices, 3) reinforcement of learned behavior as practice continued, and 4) the motivation of most patients to want to feel in control.

REFERENCES

- Bick PA, Kinsbourne M: Auditory hallucinations and subvocal speech in schizophrenic patients. Am J Psychiatry 1987; 144:727-225
- Erickson GD, Gustafson GJ: Controlling auditory hallucinations. Hosp Community Psychiatry 1968; 19:327–329
- Gould LN: Verbal hallucinations and activity of vocal musculature. Am J Psychiatry 1948; 105:367

 –372
- Gould LN: Auditory hallucinations and subvocal speech: objective study in a case of schizophrenia. J Nerv Ment Dis 1949; 109:418–427
- Gould LN: Verbal hallucinations as automatic speech: the reactivation of dormant speech habit. Am J Psychiatry 1950; 107:110-119

RICHARD C. EVENSON, PH.D. St. Louis, Mo.

Doom Anxiety and Hoigne's Syndrome

SIR: We wish to add evidence to support the observation of Stephen M. Saravay, M.D., and associates (1) that "fears of impending doom or the belief that death has occurred are specific manifestations of lidocaine toxicity." Recently, we reported on four adolescents who developed Hoigne's syndrome after intramuscular injection of procaine G penicillin (2). One of the patients became extremely frightened immediately after the injection, expressing fear of impending death. Within seconds he was completely delusional and stated, "I am dead; I have just died" (2). Despite the differences in age and underlying illness, the similarity of symptom development in Saravay et al.'s patients after receiving an injectable local anesthetic is striking.

The brief duration of the psychiatric symptoms can be explained in terms of toxicity: the half-life of lidocaine and/or procaine is very short. They are hydrolyzed by serum cholinesterase to nontoxic metabolites, which are excreted in the urine (3). Small amounts of esterase are also present in the spinal fluid. It has long been known that the hydrolysis of procaine and its derivatives is slower in spinal fluid than in plasma (4). It may be speculated that any elevation of lidocaine in the cerebral tissue concentration may result in a short-lived toxic reaction in the brain of cardiac patients receiving this medication in a manner similar to that in which a rise in cerebral tissue concentration of free procaine causes Hoigne's syndrome (2).

Prostaglandin E and thromboxane A₂ may play an important role in the genesis of "doom anxiety." Procaine, for instance, has been shown to be a powerful prostaglandin E antagonist (5). High levels of thromboxane A₂ are found in individuals with extreme anxiety and depression (6). Further research is necessary to understand the CNS toxicity of lidocaine and related antiarrhythmics.

REFERENCES

- Saravay SM, Marke J, Steinberg MD, et al: "Doom anxiety" and delirium in lidocaine toxicity. Am J Psychiatry 1987; 144:159–163
- Silber TJ, D'Angelo L: Psychosis and seizures following the injection of penicillin G procaine: Hoigne's syndrome. Am J Dis Child 1985; 139:335-337
- 3. Usubiaga JÉ, Moya F, Wikinski J, et al: Relationship between the passage of local anesthetics across the brain-blood barrier and their effects on the central nervous system. Br J Anaesth 1967; 39:943–947
- Foldes FF, Aven MH: Hydrolysis of procaine and 2chloroprocaine in spinal fluid. J Pharmacol Exp Ther 1952; 105:259-264
- Manku MS, Horrobin DF: Chloroquine, quinine, procaine, quinidine and clomipramine are prostaglandin agonists and antagonists. Prostaglandins 1976; 12:789–801
- 6. Horrobin DF: Tricyclic antidepressants, anxiety, thromboxane A2, and dipyridamole (letter). Am J Psychiatry 1979; 136:124

TOMAS SILBER, M.D. LAWRENCE D'ANGELO, M.D.. M.P.H. Washington, D.C.

Holding Environment

SIR: Dr. Robert Waldinger's overview of intensive psychodynamic therapy with borderline patients (1) was a comprehensive, sensitive, and helpful survey. It stimulated me to address what I consider to be an underemphasized issue involving D.W. Winnicott's concept of "holding environment" (2), which Dr. Waldinger and others have used to differentiate the more insight- or word-oriented from the more experiential or "corrective emotional experience" approaches.

Winnicott stressed that the holding environment is always a metaphor—even telephone calls between sessions can only symbolize early maternal care. However, within metaphor and symbol, the therapist has a hierarchy of moves that range from concrete "holding" acts to use of the therapeutic setting itself as a more generalized support.

The developmental continua of language formation and stratification should be considered here. Winnicott himself referred to the "base" of the developmental pyramid when he described how the presymbolic, me/not-me transitional object is endowed by the infant with a name of endearment. Then sometimes a near-syntactic (holophrastic) word can be "carried" as a transitional phenomenon by the beginning-to-speak child (3).

Later on, language can act as a transitional "object" and have a presymbolic significance. Here, words are things, and yet, at the same time, they possess primitive meanings. This use of language persists in patients with concretistic thinking as well as in what linguist Roman Jacobson has called "poetic language" (4). The concept of "transitional language" meshes well with language philosopher Susanne Langer's (5) "presentational symbolism," where things, words, and actions are "presented" rather than represented as symbolic forms. Language is then more protosymbolic (with symbol and referent only partly separated) than symbolic, where the symbol and referent, and the addressor and addressee, are differentiated.

All this, I believe, is pertinent to the therapy of borderline patients, who tend to show excessive use of protosymbolic thinking and language. The therapist, either consciously or unconsciously, usually makes more presentational, protosym-

bolic interventions. This usage would correspond to the approaches of Buie and Adler and of Chessick, which emphasize experience and validation, where the holding function of language is stressed over its meaning. On the therapist's part, the "thingness" of language is necessary when the patient is in a regressive fluctuation. However, when he or she has internalized or differentiated sufficiently to be at a more symbolic level, interpretation can become more hermeneutic and directly communicative—basically, more "meaning-full." These are not two polar positions, but a fluctuating Heraclitean spectrum.

I suggest that a more developmental and linguistic concept of the holding environment provided by the therapeutic situation leads to a less clear-cut but more heuristic differentiation between the insight and the corrective emotional experience schools of thought. We can use models of how parents hold their infants, literally, and their children at the level of the total home and family setting and atmosphere, and, even more figuratively, with communicative symbolic utterances. These models may help us arrive at a more sophisticated understanding of the interactive continuum between the hermeneutic and the more concrete holding functions of verbal psychotherapeutic interventions and interpretations.

REFERENCES

- 1. Waldinger R J: Intensive psychodynamic therapy with borderline patients: an overview. Am J Psychiatry 1987; 144:267–274
- Winnicott DW: Playing and Reality. New York, Basic Books, 1971
- Weich M: Transitional language, in Between Reality and Fantasy: Transitional Objects and Phenomena. Edited by Grolnick S, Barkin L, in collaboration with Muensterberger W. New York, Jason Aronson, 1978
- 4. Jacobson R: Linguists and poetics, in Style and Language. Edited by Sebeok T. Cambridge, MIT Press, 1960
- Langer SK: Philosophy in a New Key. Cambridge, Harvard University Press, 1942

SIMON A. GROLNICK, M.D. Manhasset, N.Y.

Attention Deficit Disorder and Depression

SIR: The article "High Rate of Affective Disorders in Probands With Attention Deficit Disorder and in Their Relatives" by Joseph Biederman, M.D., and his associates (1) raised an intriguing question. Depression has long been suspected to be a collection of different diseases that we cannot differentiate. One such separate disease might be residual attention deficit disorder. Diagnostic evaluations of adults seldom attempt to rule out this diagnosis, yet "reactive" cyclothymia is one of the defining characteristics of residual attention deficit disorder (2). The study by Dr. Biederman and colleagues found that one-third of attention deficit disorder probands met the DSM-III criteria for an additional diagnosis of depression and that the morbid risk for depression in their first-degree relatives was greatly elevated (around 30%) compared to that of relatives of probands without attention deficit disorder (6%). The intriguing finding was that the morbid risk of depression in relatives was no different for attention deficit disorder probands with concurrent depression than for attention deficit disorder probands without depression. This is not consistent with the known transmission patterns of primary depression.

Attention deficit disorder itself is familial, however. A testable hypothesis is that most of the depressed relatives of attention deficit disorder probands are suffering from attention deficit disorder itself, with reactive cyclothymia of such severity as to meet the DSM-III criteria for major depressive episode. It is important to know whether residual attention deficit disorder appears in a separable subset of patients presenting with depression and to know how large this subset might be, because the pharmacotherapy of attention deficit disorder is different from that of primary depression.

REFERENCES

- Biederman J, Munir K, Knee D, et al: High rate of affective disorders in probands with attention deficit disorder and in their relatives: a controlled family study. Am J Psychiatry 1987; 144:330–333
- Woods D: The diagnosis and treatment of attention deficit disorder, residual type. Psychiatr Annals 1986; 16:23–28

DANIEL D. PUGH, M.D. Urbana, Ill.

Positive and Negative Subtypes in Schizophrenia

SIR: The article by Nora D. Volkow, M.D., and associates, "Phenomenological Correlates of Metabolic Activity in 18 Patients With Chronic Schizophrenia" (1), categorized schizophrenic patients into groups of "patients with positive symptoms" and "patients with negative symptoms" on the basis of continuous numeric ratings of each type of symptom. Subsequent analyses compared these two groups on various biological measures obtained from a positron emission tomographic (PET) study. We examined the positive and negative symptom data presented by Dr. Volkow and her associates to determine whether they warranted categorization. Univariate distributions of positive and negative symptom scores were unimodal, and visual inspection of bivariate scatterplots of positive and negative symptom scores showed no strong evidence of discrete, homogeneous clusters. We also used formal cluster analysis techniques to search for clusters. The Statistical Analysis System (SAS) cluster procedure on raw and standardized scores with three different methods of cluster formation (the centroid, average linkage, and Ward's methods) and the cubic clustering criterion as the basis of evidence of clusters displayed no evidence of discrete subtypes of schizophrenic patients.

Even if, in spite of the absence of empirical evidence of natural clusters, one were to desire to form categories on the basis of negative and positive symptom scores, it is not clear why the authors chose a cutoff based solely on negative symptom scores (a score of 4). The result of this cutoff was that two patients with equal scores of 3 for positive and negative symptoms were categorized as "patients with positive symptoms," two patients with equal positive and negative symptom scores of 4 were categorized as "patients with negative symptoms," and two patients with a higher negative score than positive (3 vs. 2) were called "patients with positive symptoms." The two "negative symptom" patients with positive symptom scores of 4 actually had a higher positive symptom score than seven of eight of the "patients with positive symptoms"!

More empirical evidence to justify categorization of schizophrenic patients into positive, negative, or mixed subtypes is needed. Analyses of psychopathological data on over 100 schizophrenic subjects from our studies have not

revealed any strong empirical evidence of subtypes of schizophrenic patients based on continuous positive and/or negative symptom variables in univariate or multivariate distributions (Locascio, Kenny, Lee, et al., in preparation).

Dr. Volkow and colleagues also performed "dimensional analyses" in which positive and negative symptom variables, in their continuous numeric form, were related to biological measures (using Pearson correlations). They found a tendency for positive symptom scores to correlate positively with measures of glucose metabolism across brain regions and negative symptoms to correlate negatively, with some correlations being significant. Since positive and negative scores tended to be negatively correlated with each other and each apparently had an opposite relationship to the biological variables, some of the latter relationships may have been spuriously accentuated. We performed multiple regressions of each biological variable on positive and negative symptoms as simultaneous predictors and found that partial standardized beta weights and partial correlations for both positive and negative symptoms were always diminished, compared to what the ordinary correlations had shown, by roughly 20%-50% in terms of reduction in variance accounted for. The partialed coefficients were borderlinesignificant in only one case (relationship of positive symptoms to glucose metabolism in the left occipital region, p = .066).

REFERENCE

 Volkow ND, Wolf AP, Van Gelder P, et al: Phenomenological correlates of metabolic activity in 18 patients with chronic schizophrenia. Am J Psychiatry 1987; 144:151–158

> HERBERT Y. MELTZER, M.D. JOSEPH LOCASCIO, PH.D. Cleveland, Ohio

SIR: Nora D. Volkow, M.D., and associates presented evidence that the cerebral metabolic pattern of schizophrenic patients with pronounced negative symptoms is characterized by more severe hypofrontality. Their data are congruent with previous reports suggesting greater cognitive impairment in patients with this phenomenological profile and a possible neurological basis for the differences (1, 2). Notwithstanding the importance of the authors' findings, there is a growing consensus of opinion that the neuropathology in schizophrenia is probably multifaceted, that its relationship to the positive-negative distinction is not clear-cut, and that the spectrum of cognitive and neurological impairments cannot be fully accounted for by the positive-negative dimension (3, 4). Given the heterogeneity of schizophrenia and the complexity of its presentation, there may exist various sources of neuropsychological deficit and perhaps also interactions among these.

Recent study by our group (Rosenkilde, Opler, Kay, et al., manuscript in preparation) supports the proposition of a multifactorial model of neurocognitive deficit in chronic schizophrenia. A sample of 42 schizophrenic patients with diagnoses made according to DSM-III criteria who had been ill for at least 3 years was administered a wide-ranging battery of neuropsychological tests; these assessed the integrity of elementary functions in the realms of learning, memory, perception, conceptual thinking, and verbal fluency. The scores were subjected to factor analysis, which indicated six distinct areas of deficit, and the relationship of these derived components to external variables was studied by means of multiple regression analysis. The dependent

variables that were examined included scores on the Positive and Negative Syndrome Scale (5), a cognitive developmental test battery, and other psychometric, historical, and phenomenological measures.

The analyses disclosed six independent aspects of neuropsychological deficit. These were significantly associated with separate facets of the schizophrenic disorder: negative syndrome, neurological soft signs, lower intelligence, impaired stimulus processing, hyperarousal, and autistic withdrawal. Thus, six possible sources of cognitive dysfunction were delineated in correspondence to the neuropsychological profiles; one appeared to represent the negative symptom dimension, yet other distinct covariates of neuropathology in schizophrenia were also brought into relief.

It is interesting that the negative syndrome in our study was uniquely correlated with prefrontal cortical dysfunctions, as demonstrated on the Wisconsin Card Sorting Test. In this respect our results are consistent with the findings of Dr. Volkow and colleagues, who used psychobiological rather than psychometric techniques. We would stress, however, that their conclusions do not preclude the possibility of other components underlying the neurocognitive disorder. If negative presentation explains a significant portion of this variance, elucidation of the other sources becomes even more pressing. In this quest it seems necessary to consider other conceptualizations of schizophrenic pathology besides, or in conjunction with, the positive-negative dimension. At this still early stage, hypothesis-generating multidimensional research remains an important strategy for exploring the parameters of schizophrenia.

REFERENCES

- Andreasen NC, Olsen SA: Negative ν positive schizophrenia: definition and validation. Arch Gen Psychiatry 1982; 39:789– 794
- Andreasen NC, Olsen SA, Dennert JW, et al: Ventricular enlargement in schizophrenia: relationship to positive and negative symptoms. Am J Psychiatry 1982; 139:297–302
- Bilder RM, Mukherjee S, Rieder RO, et al: Symptomatic and neuropsychological components of defect states. Schizophr Bull 1985; 11:409-419
- Kay SR, Opler LA, Fiszbein A: Significance of positive and negative syndromes in chronic schizophrenia. Br J Psychiatry 1986; 149:439–448
- Kay SR, Fiszbein A, Opler LA: The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. Schizophr Bull 1987; 13:261–276

STANLEY R. KAY, PH.D. LEWIS A. OPLER, M.D., PH.D. New York, N.Y.

Dr. Volkow and Colleagues Reply

SIR: We understand the main point of the comment by Drs. Meltzer and Locascio to be that schizophrenic patients do not generally present as discrete "positive symptom" versus "negative symptom" subtypes. We could hardly agree more with that conclusion, and it is perplexing that anyone could have interpreted our position otherwise.

In recognition of the absence of discrete subtypes, we treated the positive symptom and negative symptom dimensions as continuous variables in correlational analysis. Classification resulting from arbitrarily dichotomizing the negative symptom continuum was explained as follows: "Because the distinction between positive and negative symptom pre-

sentation is not a pure one (many patients show some combination of positive and negative symptoms at the same time), we classified the patients into two subgroups on the basis of predominance of negative symptoms." Negative symptoms were selected as the basis for classification because they appeared most relevant in our data for variations in brain metabolic activity, especially in relation to reduced response to activation. A median split on the negative symptom continuum was used to display the differences in brain metabolism. In alternative analyses, the positive and negative symptom variables were treated as continuous.

Our recognition that the positive and negative symptom complexes are not mutually exclusive bases for a discrete classification is further emphasized in our discussion of the results. "The clinical distinction of the group of schizophrenic patients into those with negative and positive symptoms revealed the simultaneous occurrence of both positive and negative symptoms in both groups. The most chronic and severely ill patients had the highest values for measures of negative symptoms but also showed considerable florid pathology of a positive nature."

Having agreed with Drs. Meltzer and Locascio concerning the absence of discrete positive and negative symptom schizophrenic subtypes, we do not agree with the appropriateness of their concern for a reciprocal presentation of the two types of symptoms. They comment that positive and negative symptoms tend to be negatively correlated with each other. If the correlation were substantial, that would imply that patients with low negative symptom scores should have high positive symptom scores. The whole point of our discussion was that this is not so. You can't have it both ways! The correlation between positive and negative symptom scores did not even reach statistical significance in our data. As we reported, patients with high negative symptom counts had significantly lower brain metabolic activity, a finding that was accentuated under conditions of activation by an eye tracking task. Positive symptom counts and negative symptom scores tended to correlate in opposite directions with brain metabolic activity under baseline conditions but not under task stimulation. This difference suggests to us that it is proper to treat positive and negative symptom complexes as separate dimensions, even if they are modestly correlated under certain conditions. Such treatment is compatible with the widely held notion that positive and negative symptoms tend to represent distinct underlying processes, not mutually exclusive conditions.

We appreciate the letter of Drs. Kay and Opler showing findings similar to ours with the use of psychometric tests. We also agree with them that neuropathology in schizophrenia is probably multifaceted and that the negative-positive distinction represents one of its dimensions. Indeed, our previous work supports the hypothesis of the multidimensional nature of schizophrenia (1).

REFERENCE

1. Volkow ND, Brodie JD, Wolf AP, et al: Brain organization in schizophrenia. J Cereb Blood Flow Metab 1986; 6:441-446

> NORA D. VOLKOW, M.D. ALFRED P. WOLF, PH.D. PETER VAN GELDER, PH.D. JONATHAN D. BRODIÉ, M.D. JOHN E. OVERALL, PH.D. ROBERT CANCRO, M.D. FRANCISCO GOMEZ-MONT, M.D. Houston, Tex.

Dementia and Depression

SIR: The article "Frequency and Presentation of Depressive Symptoms in Patients With Primary Degenerative Dementia" by Lawrence W. Lazarus, M.D., and colleagues (1) raises a number of questions.

First, why was a structured rating scale such as the Global Deterioration Scale (2) not employed to ascertain more accurately the stage of dementia? The study's results would have been more meaningful if the minimal manifestations of dementia required for inclusion in the category of mild dementia had been specified. Similarly, what criteria did the authors use to differentiate cases of moderate from cases of severe dementia?

Second, are those items chosen by the authors to represent the "intrapsychic manifestations of depression in the elderly" representative of depression, or are they nonspecific and could be present in a number of psychiatric disorders?

Third, did those patients categorized as suffering from moderate and severe depression on the basis of Hamilton scale scores meet the DSM-III diagnostic requirements for major depression? Is it not possible that these patients were in fact depressed patients, and the clinical picture was one of a depressive pseudodementia (3)?

The authors' response to these questions is of interest to us and could be of interest to other readers of the Journal.

REFERENCES

- 1. Lazarus LW, Newton N, Cohler B, et al: Frequency and presentation of depressive symptoms in patients with primary degenerative dementia. Am J Psychiatry 1987; 144:41-45
- 2. Reisberg B, Ferris SH, De Leon MJ, et al: The Global Deterioration Scale for assessment of primary degenerative dementia. Am J Psychiatry 1982; 139:1136-1139
- 3. McAllister TW: Overview: pseudodementia. Am J Psychiatry 1983; 140:528-533

BARRY SIEGEL, M.D. ELIEZER PERL, M.D. DAVID GUREVICH, M.D. Detroit, Mich.

SIR: We read the elegant work of Lazarus et al. and are writing this letter to point out a probable confounding variable that was not discussed in the paper. We are referring to the selection of a control group, with a mean age of 69 years, made up of paid volunteers living in the community. We have recently completed a study of metabolic bone disease in 116 community-living male volunteers with a mean age of 72 years. All—secretaries and technologists alike—who have worked with this group agree that these volunteers are not "normal." Rather, they are a self-selected group who have distinguished themselves by actively participating in a scientific study in their later years. By and large, their positive attitudes were obvious and infectious; the study group was a joy to work with.

It is no surprise that in Lazarus et al.'s study, such a group of active volunteers showed less depressed mood, fewer paranoid symptoms, and less helplessness and hopelessness. If they had been paranoid, helpless, and hopeless, they probably would not have volunteered to participate. On the other hand, the self-selected participants did not differ from the demented group in vegetative symptoms. Considering the possibility that the affective status of the control group was better than "normal" strengthens the finding that vegetative symptoms are not characteristic of dementia.

The reader is advised to pay close attention to the recruiting selection bias in any group of elderly control subjects.

PAUL J. DRINKA, M.D. JOEL E. STREIM, M.D. Madison, Wis.

Dr. Lazarus and Associates Reply

SIR: We are grateful for the thoughtful letter of Drs. Siegel, Perl, and Gurevich and that of Drs. Drinka and Streim regarding our article.

The first question posed by Dr. Siegel and his colleagues, about the stage of our patients' Alzheimer's disease, is critically important, since it is generally believed (but has not been empirically tested) that patients in the early, as opposed to the advanced, stages of a dementing illness may be more prone to a concomitant depression because they are aware of and threatened by, on some level, the changes affecting their cognitive functioning. We did not extensively review in our paper the criteria used to substantiate the statement that the patients had "mild" dementia. To clarify this now, we would like to point out that all of our patients and control subjects participated in 2 full days of extensive evaluations, which included history, physical and psychiatric assessment, extensive laboratory tests, and a CAT brain scan. A large battery of memory, language, and perceptual assessment instruments was used, such as the logical memory and visual reproduction subtests of the Wechsler Memory Scale and the Animal Naming, Visual Confrontation Naming, and Spoken Commands subtests of the Boston Diagnostic Aphasic Examination, which have been shown to have good discriminative (mild Alzheimer's disease versus healthy) validity in previously published research (1, 2). The results of all these tests indicated that at the time of entry into our study, the Alzheimer's patients had either mild or early moderate dementia according to current criteria (3). As Dr. Siegel and associates have suggested, we would have used the Global Deterioration Scale for measuring the stage of dementia, but, unfortunately, our 5-year longitudinal study began in 1978, when this instrument was not yet available.

With regard to the second issue posed by Dr. Siegel and associates, regarding the specificity of intrapsychic (such as feelings of hopelessness, worthlessness, and helplessness and depressed mood) as opposed to vegetative signs and symptoms for diagnosing depression in patients with Alzheimer's disease, it should be noted that other investigators (4) studying depression in the medically ill have emphasized the importance of cognitive/affective symptoms. Vegetative symptoms of depression are often not good discriminators of depression in the medically ill because they are often present in medically ill, euthymic patients.

The last question, regarding the possibility that some of our moderately to severely depressed patients with Alzheimer's disease may have, in fact, been suffering from depressive pseudodementia, is an important clinical distinction, because pseudodementia is entirely reversible and is sometimes mistaken for a degenerative dementia. We ruled out the possibility of pseudodementia with histories obtained from reliable family members and the extensive tests that we have noted. In retrospect, in addition to our use of total scores on the 24-item Hamilton Rating Scale for Depression of 17–22 and more than 23 to indicate moderate and severe degrees of depression, respectively, it would have been helpful to use the *DSM-III* criteria for major depression.

Drs. Drinka and Streim correctly point out in their letter the fallacy of assuming that normal community-dwelling elderly people who volunteer for a study such as ours are truly representative of a normal control group. However, we attempted to match our patient and control groups for age and sex and did use group differences in education as a covariate in the data analysis. The fact that the affective status of the control group was better than one might normally find in an average group of community-dwelling elderly subjects and that our control and Alzheimer's groups did not differ significantly on the vegetative items of the Hamilton depression scale does underline the importance of focusing more on intrapsychic or psychological, rather than endogenous or vegetative, symptoms of depression in making accurate diagnoses of depression in patients with Alzheimer's disease.

REFERENCES

- Storandt M, Botwinick J, Dansiger W, et al: Psychometric differentiation of mild senile dementia of the Alzheimer type. Arch Neurol 1984; 41:497

 –499
- Ober BA, Dronkers NF, Koss E, et al: Retrieval from semantic memory in Alzheimer-type dementia. J Clin Exp Neu opsychol 1986; 8:75–92
- 3. Reisberg B, Ferris SH, Crook T: Signs, symptoms, and course of age-associated cognitive decline, in Alzheimer's Disease: A Report of Progress (Aging, vol 19). Edited by Corkin S, Davis KL, Growdon E, et al. New York, Raven Press, 1982
- Cavanaugh S, Clark DC, Gibbons RD: Diagnosing cepression in the hospitalized medically ill. Psychosomatics 1983; 24:809–815

LAWRENCE W. LAZARUS, M.D.
NANCY NEWTON, PH.D.
BERTRAM COHLI R, PH.D.
JARY LESSER, M.D.
CRAIG SCHWEON, PH.D.
Chicago, Ill.

Neuroleptic Malignant Syndrome and Lethal Cataconia

SIR: Although they called it by different names, Harrison G. Pope, Jr., M.D., et al. (1) and Stephan C. Mann, M.D., et al. (2) have recently written in the *Journal* about a disorder accompanied by hyperthermia, extrapyramidal manifestations, and autonomic dysfunction. One wonders whether "neuroleptic malignant syndrome" and "lethal catatonia" are the same disorder.

Both Pope and associates and Addonizio et al. (3) have mentioned leukocytosis (>15,000 cells/mm³ for Pope et al. and >10,800 cells/mm³ for Addonizio et al.) and elevated creatine phosphokinase level (>300 U/ml for Pope et al. and >83 U/liter for Addonizio et al.) as further evidence of the disorder.

In order to determine whether neuroleptic malignant syndrome and lethal catatonia are the same disorder, I would suggest to interested clinicians that WBC and creatine phosphokinase level be evaluated in all patients in whom lethal catatonia is suspected. If the results are similar to those reported by Pope et al. and Addonizio et al., one may be more inclined to think of these disorders as being the same.

REFERENCES

1. Pope HG Jr, Keck PE Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome in a large psychiatric hospital. Am J Psychiatry 1986; 143:1227–1233

- Mann SC, Caroff SN, Bleier HR, et al: Lethal catatonia. Am J Psychiatry 1986; 143:1374–1381
- Addonizio G, Susman VL, Roth SD: Symptoms of neuroleptic malignant syndrome in 82 consecutive patients. Am J Psychiatry 1986; 143:1587–1590

RODRIGO A. MUNOZ, M.D. San Diego, Calif.

Drs. Mann and Caroff Reply

SIR: Dr. Munoz points to striking similarities in the core symptoms of lethal catatonia and the neuroleptic malignant syndrome and suggests that both might represent a single disease entity. However, findings from our review indicated that lethal catatonia should be viewed as a syndrome rather than a specific disease. While lethal catatonia is most commonly recognized as an outgrowth of functional psychiatric conditions, it may also develop in association with diverse organic illnesses directly or indirectly affecting the CNS. We suggested that the neuroleptic malignant syndrome constitutes a toxic or iatrogenic neuroleptic-induced organic form of the lethal catatonia syndrome.

A causal relationship between the neuroleptic malignant syndrome and neuroleptic treatment is supported by the syndrome's occurrence in nonpsychotic patients, its reoccurrence following reexposure to neuroleptics, and the appearance of conditions similar to neuroleptic malignant syndrome after treatment with dopamine-depleting drugs other than neuroleptics and after withdrawal from dopamine agonists (1).

Furthermore, the clinical presentation of the neuroleptic malignant syndrome appears less varied than that of lethal catatonia. As detailed in our review, excited lethal catatonia, characterized by extreme motoric hyperactivity before the onset of stupor, represents the form of this disorder most commonly reported during both the preneuroleptic and contemporary eras. In excited lethal catatonia, body temperature progresses to profound elevations during the hyperactive stage. While hyperactive periods often precede the onset of the neuroleptic malignant syndrome, such periods are unaccompanied by significant hyperthermia (1, 2). Rather, in the neuroleptic malignant syndrome, hyperthermia almost uniformly emerges with the onset of stupor and rigidity. Thus, the neuroleptic malignant syndrome most resembles those cases of lethal catatonia which have a primarily stuporous course.

Various laboratory abnormalities have been observed in the neuroleptic malignant syndrome. However, their actual prevalence is unclear, since many reports fail to provide specific details. Increased leukocyte counts were explicitly mentioned as absent or present in only 24 of the 53 cases of neuroleptic malignant syndrome reviewed by Levenson (1). In 19 (79%) of these 24, leukocytosis was present. In our review of 292 recent lethal catatonia cases, leukocyte counts were explicitly reported in 134. In 66 (49%) of these 134, leukocytosis was present. Similarly, serum creatine phosphokinase levels, explicitly reported in 32 of Levenson's 53 cases, were elevated in 31 (97%) of these 32. Serum creatine phosphokinase levels were clearly obtained in only three of the 292 cases we reviewed. In two of these three cases, levels were elevated.

Incomplete reporting of clinical data compromises attempts to compare the neuroleptic malignant syndrome and lethal catatonia. Since transient increases in serum creatine phosphokinase levels have been reported in substantial percentages of acutely psychotic patients in general (3), we suspect that elevations of this enzyme, if looked for, would have been detected in many more of the 292 lethal catatonia cases we reviewed. Still, the various laboratory abnormalities associated with both disorders appear nonspecific and probably cannot help in distinguishing among the neuroleptic malignant syndrome, lethal catatonia, and other related hyperthermic disorders.

REFERENCES

- Levenson JL: Neuroleptic malignant syndrome. Am J Psychiatry 1985; 142:1137–1145
- Caroff SN: The neuroleptic malignant syndrome. J Clin Psychiatry 1980; 41:79–83
- Meltzer HY: Serum creatine phosphokinase in schizophrenia. Am J Psychiatry 1976; 133:192-197

STEPHAN C. MANN, M.D. STANLEY N. CAROFF, M.D. Philadelphia, Pa.

Diagnosing and Defining Neuroleptic Malignant Syndrome

SIR: The article by Gerard Addonizio, M.D., et al. (1) has raised important questions with far-reaching implications about the diagnosis of neuroleptic malignant syndrome. Although it has been generally acknowledged that neuroleptic malignant syndrome remains underdiagnosed, we have reason to believe that the pendulum is definitely swinging to the other side. Recently, in the published literature there has been a tendency to overdiagnose this iatrogenic condition. A look at the estimated prevalence figures over a period of time tends to substantiate this impression. The prevalence was estimated to be 0.5%–1.0% in earlier studies (2), 0.2% in 1981 (3), 0.4% in 1986 (4), and 2.4% in the study by Addonizio et al. It is striking that the higher figures are coming from American studies, in contrast to figures available from the rest of the world (3–5).

Probably the criteria used for diagnosis of neuroleptic malignant syndrome are becoming too loose in studies from the United States (5). In some of the studies the diagnosis was made in the absence of hyperpyrexia (5), which was hitherto considered a sine qua non for diagnosing neuroleptic malignant syndrome (2). Addonizio et al. suggested that the prevalence may be as high as 12.2% if so-called "milder variants" of neuroleptic malignant syndrome are included. Unfortunately, such high figures are being suggested on the basis of retrospective chart reviews that have followed a symptom checklist approach to the diagnosis of neuroleptic malignant syndrome. Traditionally, the diagnosis has been made on clinical grounds, with laboratory investigations being only of peripheral value and inessential for making the diagnosis. Studies based on retrospective chart reviews with a symptom checklist approach are not in a position to rule out other medical causes of unexplained fever. In fact, dissatisfaction has been expressed on similar grounds with respect to the nosologic status of neuroleptic malignant syndrome (6).

The spectrum concept of neuroleptic malignant syndrome also depends on too wide a definition. The validity of the spectrum concept cannot be ascertained on the basis of anecdotal reports and requires well-planned prospective studies. The spectrum concept, if validated, may challenge the assumption regarding the idiosyncratic nature of the condition.

REFERENCES

- Addonizio G, Susman VL, Roth SD: Symptoms of neuroleptic malignant syndrome in 82 consecutive inpatients. Am J Psychiatry 1986; 143:1587–1590
- Delay J, Pichot P, Lemperiere T, et al: L'emploi des butyrophenones en psychiatrie: etude statistique et psychometrique, in Symposium Internazionale sull'Haloperidol e Triperidol. Milan, Instituto Luso Farmaco d'Italia, 1963
- Singh G: The malignant neuroleptic syndrome: a review with report of three cases. Indian J Psychiatry 1981; 23:179–183
- Shalev A, Munitz H: The neuroleptic malignant syndrome: agent and host interaction. Acta Psychiatr Scand 1986; 73:337–347
- Pope HG Jr, Keck PE Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome in a large psychiatric hospital. Am J Psychiatry 1986; 143:1227–1233
- Levinson DF, Simpson GM: Neuroleptic-induced extrapyramidal symptoms with fever. Arch Gen Psychiatry 1986; 43:839– 848

ADITYANJEE, M.D. Kuala Lumpur, Malaysia

logic insult, but the severity of the resulting illness may still vary widely. That the disease occurs is idiosyncratic, not the response.

REFERENCES

- Delay J, Pichot P, Lemperiere T, et al: L'emploi des butyrophenones en psychiatrie: etude statistique et psychometrique, in Symposium Internazionale sull'Haloperidol e Triperidol. Milan, Instituto Luso Farmaco d'Italia, 1963
- 2. Singh G: The malignant neuroleptic syndrome: a rev ew with report of three cases. Indian J Psychiatry 1981; 23:179–183
- Shalev A, Munitz H: The neuroleptic malignant syndrome: agent and host interaction. Acta Psychiatr Scand 1986; 73:337– 347
- Pope HG Jr, Keck PE Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome in a large psychiatric hospital. Am J Psychiatry 1986; 143:1227–1233

GERARD ADDONIZIO, M.D. VIRGINIA L. SUSMAN, M.D. STEVEN D. ROTH, M.D. White Plains, N.Y.

Dr. Addonizio and Colleagues Reply

SIR: Dr. Adityanjee criticizes American studies for reporting higher prevalence figures for neuroleptic malignant syndrome, which he feels are based on "too loose" diagnostic criteria and on retrospective chart reviews; he goes on to quote lower figures from non-American studies. Despite his criticisms, he cites an estimate of 0.5%-1.0% that is based simply on one statement that five cases of neuroleptic malignant syndrome were found among several hundred treated patients (1). This figure has been quoted for many years without any rigorous scrutiny. He then quotes figures of 0.2% (2) and 0.4% (3) that are based on retrospective reviews in which the diagnostic criteria for neuroleptic malignant syndrome and the method for collection of data were not even mentioned. We agree that these criteria must be clear; that is exactly what we feel our study and the study by Pope et al. (4) accomplished. In addition, we pointed out that our prevalence figure may not be generalizable, as we studied only young men-a group that has been considered to be more prone to neuroleptic malignant syndrome. Also, we affirmed the need for "further well-controlled prospective studies.'

Both the data and clinical experience demonstrate that neuroleptic malignant syndrome is a spectrum disorder and that there are milder variants. Perhaps the real difficulty is in calling this whole spectrum "malignant," a term that may only be appropriate for the most severe form. Nevertheless, nosology should not deter us from making useful clinical observations. We agree that the diagnosis is made largely on clinical grounds; seven of our nine items for making the diagnosis of neuroleptic malignant syndrome were exactly that; only two comprised laboratory data. We also feel that determining the creatine phosphokinase level is hardly "inessential," as its rise is an important indication of one of the most lethal aspects of the illness, rhabdomyolysis. In addition, each chart not only was reviewed for symptoms of neuroleptic malignant syndrome but was thoroughly examined for any evidence of medical causes for elevated temperature. Finally, the spectrum concept in no way challenges the idiosyncratic nature of the condition. As with many other disorders in medicine, any particular individual may have an idiosyncratic response to a drug, an infection, or a physio-

Prevalence of Neuroleptic Malignant Syndrome

SIR: Harrison G. Pope, Jr., M.D., and his colleagues (1) reported that in their study the prevalence of the neuroleptic malignant syndrome was 1.4%. They took as their population at risk only those patients to whom neuroleptic drugs had been administered for 1 week or more. However, a patient in our hospital recently developed the syndrome after receiving a total haloperidol dose of 45 mg over a period of only 18 hours. Konikoff et al. (2) reported a case in which a nonpsychiatric patient developed the syndrome after a single injection of 5 mg of haloperidol. This suggests that in attempting to establish this syndrome's frequency we need to broaden the population considered at risk and include all patients receiving neuroleptics, regardless of the dose or the length of time they have received neuroleptics. We also need to consider outpatients as well as inpatients of both psychiatric and nonpsychiatric units.

REFERENCES

- Pope HG Jr, Keck PE Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome in a large psychiatric hospital. Am J Psychiatry 1986; 143:1227–1233
- Konikoff F, Kuritzky A, Jerushalmi Y, et al: Neuroleptic malignant syndrome induced by a single injection of haloperidol (letter). Br Med J [Clin Res] 1984; 289:1228–1229

PETER J. O'BRIEN, M.B.B.S. Wollongong, N.S.W., Australia

Utilization of Mental Health Care Services

SIR: In "Current Need Versus Treatment History as Predictors of Use of Outpatient Psychiatric Care," Matthew J. Friedman, M.D., Ph.D., and Alan N. West, Ph.D., (1) reported a timely study. However, I differ with some of their assumptions and believe that their findings raise some additional disturbing questions.

First, I question the arbitrary classification of the two groups of patients as "low" and "high" utilizers. By no stretch of imagination would one consider a mean ±SD of 6.5±3.7 sessions in an 18-month period a "high" rate of

utilization of services, especially since the study noted that there was a trend for these patients to be diagnosed as depressed or psychotic.

If the two groups were to be reclassified as "nonutilizers" and "low" utilizers, then one could posit that the nonutilizer group consisted of patients with relatively minor symptoms of neurosis, anxiety, adjustment reactions, or substance abuse which may well have remitted spontaneously or were insufficiently severe to even warrant treatment. In contrast, the low utilizers were, curiously, patients who suffered from relatively major and potentially treatable disorders, such as depression and psychosis. As 6.5 sessions are clearly not enough to significantly ameliorate the symptoms of these conditions or bring about improvement in any of the variables studied, the conclusion regarding the lack of correlation between use of services and success of treatment appears to be a bit premature.

The study does, however, raise the question of why this group of patients with legitimate clinical need, evidenced by their "major" diagnoses, previous treatment seeking, and higher disability ratings, were not sufficiently utilizing the admittedly scarce but free psychiatric resources offered by the Veterans Administration. Since no conclusive evidence exists to support the contention that motivation for treatment is enhanced by fee paying (2), are these patients choosing to remain ill for other intrapsychic or extrapsychic reasons, or is it because they have little conviction that they will get better? Although patient expectations have not been found to relate to outcome (3), could the care delivery system in the public sector be at least partially faulted for engendering pessimism in patients to the extent that they underutilize existing resources?

REFERENCES

- Friedman MJ, West AN: Current need versus treatment history as predictors of use of outpatient psychiatric care. Am J Psychiatry 1987; 144:355-357
- Wood WD: Do fees help heal? J Clin Psychol 1982; 38:669-673
- Duckro P, Beal D, George C: Research on the effects of disconfirmed client role expectations in psychotherapy: a critical review. Psychol Bull 1979; 86:260-275

DILIP RAMCHANDANI, M.D. *Philadelphia, Pa.*

Drs. Friedman and West Reply

SIR: We thank Dr. Ramchandani for his provocative letter. Before we respond to each of his points, it is important for us to point out that the data reported in our article were generated in a study designed to compare two different models of mental health care, i.e., centralized versus decentralized community-based treatment (1). Since that study was not designed specifically to investigate factors that affect utilization of outpatient psychiatric care, we readily acknowledge that many important questions cannot be answered by our data. We are conducting a study, however, that has been designed to address some of these questions.

Dr. Ramchandani objects to calling our heavier utilizers of treatment "high" utilizers because they received so little treatment during the 18-month study interval. We agree that comparing our two groups with a third group that averaged 30 or 50 treatment sessions during the same interval might detect a very different set of correlations, thereby leading to

very different conclusions. However, too few patients in our cohort received enough intensive psychotherapy to permit such a comparison. Therefore, our cohort was dichotomized into "high" and "low" utilizers, as reported in our article.

We do not agree with Dr. Ramchandani's assertion that "6.5 sessions are clearly not enough to significantly ameliorate" symptoms of disorders such as depression or psychosis. In fact, major psychiatric illnesses that can be treated with pharmacotherapy very often achieve significant remission within 6.5 or fewer sessions.

In our experience, spontaneous remission is rarely observed in patients with "neurosis, anxiety, adjustment reactions, or substance abuse." In contrast to Dr. Ramchandani's assumptions, we believe that many of these patients are more likely to require extensive psychotherapy, since pharmacotherapy is usually palliative at best. How, then, can we explain the paradox that the patients requiring more intensive psychotherapy tended to cluster in our low utilizer group? The answer can be found in our other article (1). Although the low utilizers (by definition) used very little Veterans Administration (VA) outpatient psychiatric treatment, they were extensive consumers of non-VA treatment provided either at community mental health centers or by private psychotherapists. We believe that these patients accurately perceived that scarce VA psychiatric resources were not adequate to meet their needs. Rather than "choosing to remain ill," as Dr. Ramchandani speculates, they sought treatment nearer their home communities in order to improve their chances of recovery.

Such findings prompt us to agree with Dr. Ramchandani's concern that scarce public sector mental health resources may engender pessimism in patients and thereby discourage them from requesting whatever care may be available.

REFERENCE

 Friedman MJ, West AN, Clark A: Integration of VA and CMHC care: utilization and long-term outcome. Hosp Community Psychiatry 1987; 38:735-740

> MATTHEW J. FRIEDMAN, M.D., PH.D. ALAN N. WEST, PH.D. White River Junction, Vt.

Poststroke Mood Disorders

SIR: Certain aspects of the investigations on poststroke depression by Robert G. Robinson, M.D., and associates (1) evoke some critical comments.

According to *DSM-III* criteria, the psychopathological conditions mentioned by the authors clearly conform to the diagnosis of organic affective syndromes. "Negative symptoms" are a frequent sign of frontal lobe dysfunction; they may be misinterpreted as resulting from a depression (2). Moreover, most organic psychosyndromes (excluding dementia) are aspecific, reversible, exogenous cerebral reaction types, liable to show a spontaneous recovery due to cerebral interdependent compensatory mechanisms, if the lesion is not extensive (3), which was undoubtedly the case in the authors' observations.

One of the putative pathogenetic mechanisms put forward by the authors is based on observations in animal experiments. I wonder whether the observed catecholamine depletion might not result from an aspecific reaction to brain damage, not necessarily related to a behavior correlate in humans, that may occur several months after the initial stroke. To my knowledge the pathophysiology of depression is still hypothetical. As emotions are most probably regulated by complex mechanisms depending on reciprocal influences between the brain hemispheres, individual differences in intensity and polarity may be expected to be mainly influenced by the general condition of the CNS and the evolution of the lesion (4, 5).

Finally, I would also like to stress that if one chooses to treat stroke patients with antidepressants, one should also take all possible side effects into account; these may occur more often in elderly and fragile vascular patients (hypotension may eventually induce another stroke or even a multi-infarct dementia, denervation receptor supersensitivity may eventually occur at the site of the lesion, etc.) (6).

REFERENCES

- Robinson RG, Lipsey JR, Rao K, et al: Two-year longitudinal study of poststroke mood disorders: comparison of acute-onset with delayed-onset depression. Am J Psychiatry 1986; 143: 1238–1244
- Hecaen H, Albert ML: Disorders of mental functioning related to frontal lobe pathology, in Psychiatric Aspects of Neurologic Disease, vol 1. Edited by Benson DF, Blumer D. New York, Grune & Stratton, 1975
- 3. Bleuler M: Acute mental concomitants of physical diseases. Ibid
- Flor-Henry P: On certain aspects of the localization of the cerebral systems regulating and determining emotions. Biol Psychiatry 1979; 14:677–697
- Gruzelier JH: Cerebral laterality and psychopathology: fact and fiction. Psychol Med 1981; 11:219–227
- Klawans HL, Weiner WJ (eds): Affective disorders, in Textbook of Clinical Neuropharmacology. New York, Raven Press, 1981

B. VAN SWEDEN, M.D., PH.D. Ghent, Belgium

Drs. Robinson and Lipsey Reply

SIR: Dr. Van Sweden's letter has raised a number of questions regarding our studies of poststroke mood disorders. The first general issue is the difficulty of diagnosing mood disorders in patients with brain injury and whether these disorders represent specific syndromes or only general responses to brain injury. Although virtually all of the patients that have been included in our studies fit the diagnostic criteria for organic affective disorder, we further divided patients into major and minor depressive subtypes (using Research Diagnostic Criteria terminology but DSM-III symptom criteria for dysthymic disorder) in an effort to determine whether different types of depression could be identified in a brain-injured population. After all, depression associated with brain injury might arise from several different sources, which could be differentially associated with specific DSM-III clinical categories.

Subsequently, our studies have demonstrated that major depression differs from minor depression in its association with lesion location (1) (major depression occurs most frequently with left frontal injury, while minor depression occurs with right or left posterior injury); in the response to dexamethasone administration (2) (only major depression is significantly associated with failure to suppress serum cortisol); in its relationship to cognitive impairment (3) (only major depression produces a dementia of depression); and in the 2-year prognosis (4) (patients with major depression who are hospitalized are significantly more improved at 2-year follow-up than patients with minor depression). Although

some symptoms associated with frontal lobe damage are seen in patients with poststroke mood disorders, typical frontal lobe symptoms, such as loss of initiative or spontaneity, indifference or irritability, lack of concern for the future, loss of interest, lack of motivation, and difficulty in organization and memory, do not constitute a sufficient syndrome for the diagnosis of either major or minor depression. In order to receive a diagnosis of a depressive disorder, our patients must express feelings of sadness or depression as well as have the other associated symptoms. In addition, the fact that we can differentiate at least two distinct clinical depressive syndromes, which have different associations with lesion location, biological markers, and long-term outcome, suggests that these are not simply "nonspecific," "organic" responses to injury. All brain injury is not the same, other in its pathology or in its clinical manifestations.

The second general issue raised by Dr. Van Sweden concerns the etiology of poststroke mood disorders. We are in agreement that the pathophysiology of depression is not known. We have suggested the involvement of biogenic amine depletion, on the basis of our animal experiments, as a tentative and testable hypothesis that might explain, first, the clinical-pathological correlations which we have noted and, second, how cortical lesions might lead to involvement of subcortical limbic processes. Since catecholamine depletion in our rat stroke model depends on the location of the brain injury (5), this could not be termed a nonspecific response to brain injury. We have also recently demonstrated in an unpublished study which used positron emission tomography (PET) scanning that right hemisphere stroke in humans produces a statistically significant increase in serotonin S2 receptor binding, compared with no change following left hemisphere strokes. Thus, in both animals and humans there appears to be a differential hemispheric biochemical response to injury. The biochemical and perhaps emotional response to injury may depend on which neurotransmitter pathways are injured, where the injury occurs in the course of that pathway, and the physiological changes provoked within that pathway or its interconnected postsynaptic neurons.

The final issue raised by Dr. Van Sweden is the caution necessary in treating poststroke depression. We agree that treatment with antidepressant medications in ar elderly (often medically ill) population is to be undertaken with caution. We have indicated in previous publications that cardiac conduction abnormalities, narrow-angle glaucoma, urinary obstruction, and delirium are all potential difficulties in using antidepressants. On the other hand, failure to treat depression after stroke leaves most patients with depression that lasts for more than a year (4), frequently produces a dementia due to depression (3), leads to deterioration in social functioning, and causes a significant retarcation in physical recovery. (In an unpublished study we found that patients with depression after stroke had less improvement of physical impairments 2 years after the stroke than patients who started out with the same degree of physical impairment but did not have poststroke depression.) Thus, although treatment must be done cautiously and sometimes in the hospital, the consequences of failure to treat these depressive disorders are not insignificant.

REFERENCES

 Robinson RG, Kubos KL, Starr LB, et al: Mood disorders in stroke patients: importance of lesion location. Brain 1984; 107:81-93

- Lipsey JR, Robinson RG, Pearlson GD, et al: The dexamethasone suppression test and mood following stroke. Am J Psychiatry 1985; 142:318–323
- Robinson RG, Bolla-Wilson K, Kaplan E, et al: Depression influences intellectual impairment in stroke patients. Br J Psychiatry 1986; 148:541–547
- 4. Robinson RG, Bolduc PL, Price TR: A two year longitudinal study of post-stroke mood disorders: diagnosis and outcome at one and two year follow-up. Stroke (in press)
- Robinson RG. Differential behavioral and biochemical effects of right and left hemispheric cerebral infarction in the rat. Science 1979; 205:707–710

ROBERT G. ROBINSON, M.D. JOHN R. LIPSEY, M.D. Baltimore, Md.

Epstein-Barr Virus and Depression

SIR: In their study on Epstein-Barr virus antibodies and major depression (1), Jay D. Amsterdam, M.D., and associates reported results that differ markedly from those of three previous studies (2–4) and two unpublished studies (Pitts et al., manuscript in preparation; Dubner, private correspondence). In these other five studies, Epstein-Barr virus antiearly-antigen antibodies were found to be characteristic of patients with major depression but not healthy control subjects or those with other psychiatric disorders.

Sometimes the reasons for experimental discrepancies are obvious. Dubner's successors, for example, changed his positive results to negative by altering the parameters and method of analysis (abstract presented to the annual meeting of the National Association of Private Psychiatric Hospitals, Bal Harbour, Fla., January 1987). The study by Dr. Amsterdam and his colleagues is more puzzling because one of the previous studies with opposite results (3) also obtained blood tests from Dr. Werner Henle's laboratory. One possible explanation for this inconsistency is cross-reactivity. Depressed patients tend to have elevated IgG antibodies to multiple herpes viruses in their peripheral blood (Allen, manuscript in preparation). Blood tests from commercial laboratories routinely detect Epstein-Barr virus anti-earlyantigen antibodies that appear to be cross-reactive, as when the other Epstein-Barr virus antibodies reflect a resolved Epstein-Barr virus infection. Perhaps Dr. Henle's laboratory measured this cross-reactivity in one study but not the other. Another possible explanation is that Dr. Henle's cell lines were different in the two studies or have undergone antigenic shift and drift with unpredictable consequences. A third possibility is a difference in interpretation with respect to what constitutes detectable anti-early-antigen antibodies under the indirect fluorescent antibody methodology (an important point that Dr. Amsterdam and his associates failed to disclose).

Many questions about the pathophysiological significance of Epstein-Barr virus antibodies in depressed patients remain to be answered. Nonetheless, the empirical fact that commercial Epstein-Barr virus blood tests can help the clinician differentiate major depression makes these tests valuable in clinical practice. Furthermore, it is of considerable practical importance for physicians to recognize that Epstein-Barr virus anti-early-antigen antibodies are characteristic of major depression. Otherwise, the primary care physician who detects such antibodies in a depressed patient may fail to refer the patient for psychiatric evaluation and treatment. This is a situation which is apparently becoming commonplace (5).

REFERENCES

- Amsterdam JD, Henle W, Winokur A, et al: Serum antibodies to Epstein-Barr virus in patients with major depressive disorder. Am J Psychiatry 1986; 143:1593-1596
- Allen AD, Tilkian SM: Depression correlated with cellular immunity in systemic immunodeficient Epstein-Barr virus syndrome (SIDES). J Clin Psychiatry 1986; 47:133–135
- 3. DeLisi LE, Nurnberger JI, Goldin LR, et al: Epstein-Barr virus and depression. Arch Gen Psychiatry 1986; 43:815–817
- Miller AH, Silberstein C, Asnis GM, et al: Epstein-Barr virus infection and depression (letter). J Clin Psychiatry 1986; 47:529-530
- 5. Allen AD, Pitts FN Jr, Allen RE, et al: Mysterious illness can be affective disorder. Science (in press)

H. HUGH FUDENBERG, M.D.

Charleston, S.C.
ALLEN D. ALLEN, PH.D.
Northridge, Calif.
FERRIS N. PITTS, JR., M.D.
ROBERT E. ALLEN, M.D.
Rosemead, Calif.

SIR: The article by Dr. Amsterdam and colleagues demonstrating the absence of chronic Epstein-Barr virus infection in adults with major depressive disorder discourages clinicians from pursuing immunologic assessments in this adult patient population. We have had a different experience in our child and adolescent population. We have seen three cases in the past year: an 11-year-old boy and two 14-year-old girls who were referred for evaluation of depressive symptoms and who, in the preceding year, had had acute mononucleosis diagnosed by their pediatricians. Two of these patients were hospitalized for suicide attempts, and one was referred for refusing to go to school. Hypersomnia, lethargy, anergia, and stomachaches were present in all three; two patients had had no previous psychiatric symptoms. Night sweats were reported in only one patient (1). The Child Behavior Checklist (2), completed by the parents, indicated symptoms in both narrow bands of Anxiety and Depression at greater than the 93rd percentile.

Results of physical examinations and laboratory assessments were unremarkable except for a palpable spleen and slightly elevated SGOT and SGPT in one patient. An Epstein-Barr virus panel revealed evidence of chronic infection with initial Epstein-Barr virus IgG titers of 1:160, 1:640, and 1:160 in the three patients; Epstein-Barr virus IgM titers were all less than 1:20. Initial Epstein-Barr virus nuclear antigen titers were elevated in two of the three patients (1:160 and 1:40), and titers to early antigen D were elevated in all three patients (1:20, 1:640, and 1:20). Furthermore, two patients were followed longitudinally and a repeat Epstein-Barr virus panel was obtained 3-6 months after initial referral, which showed resolution of the chronic Epstein-Barr virus infection. Depressive symptoms in two of the patients responded to imipramine treatment. The third patient, who had had a previous diagnosis of attention deficient disorder, became agitated while taking imipramine and responded to psychostimulant treatment.

While we agree with Dr. Amsterdam and associates that extensive immunologic assessments of depressed young people need not be routinely made, we feel that a number of discriminating historical and clinical variables increase the likelihood that chronic Epstein-Barr virus infection is present. Clearly, the patient with a history of acute mononucleosis with neither past history of depressive symptoms nor family history of psychiatric disorder may warrant such

assessment. We cannot conclude at the present time that the clinical symptom of stomachache is more typically associated with this particular population. Only a prospective longitudinal study with adequate control groups will clarify this issue. Nevertheless, we feel that the temporal correlation of acute and chronic Epstein-Barr virus infection with depressive symptoms warrants both clinical attention and further laboratory assessment.

REFERENCES

- Straus SE, Tosato G, Armstrong G, et al: Persisting illness and fatigue in adults with evidence of Epstein-Barr virus infection. Ann Intern Med 1985; 102:7–16
- Achenbach TM, Edelbrock C: Manual for the Child Behavior Checklist and Revised Child Behavior Profile. Burlington, University of Vermont Press, 1983

WELBY JENSEN, B.S. ALAN S. UNIS, M.D. Salt Lake City, Utah

Dr. Amsterdam and Associates Reply

SIR: We appreciate the thoughtful comments by Dr. Fudenberg and associates concerning the potential relationship between Epstein-Barr virus antibodies and major depression. These investigators note that our results differed from those of previous studies in which Epstein-Barr virus anti-early-antigen antibody titers were characteristic of patients with major depression but were not present in healthy control subjects. As these investigators point out, there are several possible ways to account for discrepancies in results between studies. With regard to our results, the discrepancy seems to rest on the choice of control subjects. We pointed out that our control subjects were unusually reactive. This might reflect medical personnel under stress and strain who served as a comparison group. We have also seen regional differences in Epstein-Barr virus serology results in comparisons of Sweden versus the United States and India versus France. In addition, age as well as socioeconomic conditions might play a role. It is also possible that in our control groups, a primary infection with Epstein-Barr virus may have been postponed to early adulthood, yielding higher antibody levels. After recovery, anti-R appears late in convalescence and may be detectable for 1-2 years or even longer. Also, one must not overlook the fact that about one-half of the depressed patients had entirely normal antibody profiles, and the other antibodies, such as anti-viral-capsid antigen and anti-Epstein-Barr nuclear antigen were at most slightly elevated, but far less than in true cases of reactivation of Epstein-Barr virus infections. It may be more appropriate to examine the entire spectrum of Epstein-Barr virus antibodies rather than just one antibody.

Finally, several recent studies (1, 2) with large patient samples evaluated various Epstein-Barr virus antibodies in an attempt to identify those subjects with chronic active Epstein-Barr virus infections. In the study by Holmes et al. (1), Epstein-Barr virus serology could not reliably differentiate the patients with chronic Epstein-Barr virus fatigue syndrome from comparison patients. Similarly, in the study by Buchwald et al. (2), 21% of 500 patients were found to have chronic fatigue syndrome consistent with a chronic Epstein-Barr virus infection. However, while antibodies to several Epstein-Barr virus-specific antigens were higher in the patients than in the control subjects, the differences did not

achieve statistical significance. More importantly, in the study by Holmes et al. (1), there was poor intra- and interlaboratory reproducibility for Epstein-Barr virus serology. Although these latter studies suggest an overall higher titer of antibodies to Epstein-Barr virus-specific antigens in some patients with chronic fatigue syndrome and nonspecific psychiatric illnesses (3), they do not support the concept of Epstein-Barr virus as a general causative agent for these illnesses and lend further support to our findings.

We appreciate the comments from Mr. Jensen and Dr. Unis concerning the potential relationship between antibodies to Epstein-Barr virus-specific antigens and major depression, and we note with interest the three cases of depressed adolescents who had suffered from acute mononucleosis. We would like to make several points regarding the comments.

Specifically, it was not our intention to "discourage clinicians from pursuing immunologic assessments" of depressed adults, and we stated in our last sentence that our "lack of positive results . . . should not discourage further research in this interesting area." However, our data do suggest that routine Epstein-Barr virus serology in adult patients with DSM-III major depression who are otherwise lacking symptoms suggestive of chronic active Epstein-Barr virus infections is probably not cost effective. This finding has recently been supported by findings in several studies (1, 2). In addition, none of the patients in our study were children (our minimum age was 24), and therefore we are unable to comment on whether the conclusions drawn from an adult population are applicable to a population of children with depression. Psychiatric syndromes related to mononucleosis have previously been reported in children (4), and Epstein-Barr virus serology may be useful as a diagnostic tool in children with postmononucleosis affective disorders. However, clinicians need to be aware of the low intra- and interlaboratory reproducibility of Epstein-Barr virus serology values when applying this test as a diagnostic tool (1).

REFERENCES

- Holmes GP, Kaplan JE, Stewart JA, et al: A cluster of patients with chronic mononucleosis-like syndrome: is Epstein-Barr virus the cause? JAMA 1987; 257:2297–2302
- Buchwald D, Sullivan JL, Komaroff AL: Frequency of "chronic active Epstein-Barr virus infection" in a general medical practice. JAMA 1987; 257:2302–2307
- Jones JF, Tosato G, Armstrong G, et al: Persisting illness and fatigue in adults with evidence of Epstein-Barr virus infection. Ann Intern Med 1985; 102:7-16
- Coppermen SM: "Alice in Wonderland" syndrome as a presenting problem of infectious mononucleosis in children. Clin Pediatr (Phila) 1977; 16:143–146

JAY D. AMSTERDAM, M.D.
WERNER HENLE, M.D.
ANDREW WINOKUR, M.D., PH.D.
OWEN M. WOLKOWITZ, M.D.
DAVID PICKAR, M.D.
STEVEN M. PAUL, M.D.
Philadelphia, Pa.

Depression in Women With Normal-Weight Bulimia

SIR: In the article "Short-Term Course of Depressive Symptoms in Patients With Eating Disorders" (1), Frederick S. Wamboldt, M.D., and his coauthors reported their finding that depressed normal-weight bulimic inpatients showed little improvement in their depressive symptoms after behavioral management which focused on their aberrant eating behavior. In the same study, depressed anorexic patients with bulimic behavior showed significant reduction in depressive symptoms. The authors suggested that the nature of the depressive symptoms in bulimic patients may differ depending on the presence or absence of significant weight loss.

Our clinical experience with depression in bulimic patients supports and may help to partially explain these results. Behavioral approaches can be quite powerful in breaking up the cycles of binge eating and subsequent purging. However, for some patients, even with careful management, binge eating continues after purging behaviors have decreased or stopped. This may be in response to the patient's need to please the therapist, new-found concerns about the medical complications of purging, or, in hospitalized patients, the inability to purge in private. When weight gain occurs in this situation, we have noted the emergence or worsening of anxiety, depression, and suicidal ideation.

While the criteria for depression were well defined in the article by Dr. Wamboldt and associates, "good eating behavior" for normal-weight bulimic patients was defined as self-induced vomiting less than once a week. In the study of these individuals, it is always helpful to remain cognizant of the patient's frequency of binge eating and weight gains because, in our experience, these factors play a major role in the subsequent development and maintenance of depressive symptoms. It may well be that the bulimic anorexic patients noted in this article, who were by definition severely underweight, showed more mood improvement because they were relatively less concerned about a small weight gain.

REFERENCE

 Wamboldt FS, Kaslow NJ, Swift WJ, et al: Short-term course of depressive symptoms in patients with eating disorders. Am J Psychiatry 1987; 144:362-364

> ROGER C. BURKET, M.D. JON D. HODGIN, M.D. Gainesville, Fla.

Dr. Wamboldt and Associates Reply

SIR: Clinical experience when succinctly stated remains a rich source of research hypotheses. Accordingly, we are pleased that the data in our recent article were engaging enough to stimulate Drs. Burket and Hodgin to propose a four-step sequence to explain the persistence of depression observed in the women with normal-weight bulimia in our sample. To paraphrase their suggestion, first, purging ceases (they list a number of reasons—we would add more); second, binge eating persists (they do not suggest why); third, weight gain results (presumably due to continued high caloric intake without self-induced elimination); and, finally, recognition of the weight increase leads to depression (and other psychiatric symptoms). In the language of our article, this is a secondary theory; the depression occurs after antecedent eating problems.

Clinical experience has resulted in the proposing of a good many rival hypotheses regarding the relationship between depression and eating disorders, which are enumerated in recent reviews (1, 2). Therefore, after proposing any hypothesis, it is crucial to establish the validity of one's clinical hypothesis by presenting data from other sources that do not refute the espoused hypothesis. In their letter, Drs. Burket

and Hodgin fail to marshal support for the validity of their hypothesis.

More importantly, the data from our study do *not* support the two central steps in their hypothesis. First, although they suggest that binge eating frequently continues after purging stops, in our sample, the eating symptoms changed together. That is, at follow-up the three women with bulimia who demonstrated good eating behavior outcome, defined as vomiting less than twice a week, had not binged within the past week, whereas the five women who continued vomiting reported a group total of 31 binges in the preceding week. No one in our sample continued binge eating after vomiting ceased.

Second, although Drs. Burket and Hodgin suggest that the presence of weight gain should predict the level of depression at follow-up, we found the opposite. The four women deemed depressed by admission criteria at follow-up showed a mean weight loss since admission (mean \pm SD= -1.4 ± 3.1 kg), while the four judged not depressed evidenced weight gain (1.8 \pm 2.5 kg).

The hypothesis of Drs. Burket and Hodgin is not supported by our data. Of course, our results, based on a small sample, require replication before this case can be closed. It is important to underscore that other secondary hypotheses, such as Fairburn's suggestion that depression results from the loss of control over eating behavior (3), as well as the primary hypothesis that major depression is the underlying disorder (4), remain consistent with the data we have presented. Accordingly, we must conclude, as we did in our original article, that further longitudinal study of depressive symptoms in patients with eating disorders remains warranted if we are to adequately understand this important association.

REFERENCES

- Hatsukami DK, Mitchell JE, Eckert ED: Eating disorders: a variant of mood disorders? Psychiatr Clin North Am 1984; 7:349-365
- Swift WJ, Andrews D, Barklage NE: The relationship between affective disorder and eating disorders: a review of the literature. Am J Psychiatry 1986; 143:290-299
- Fairburn CG: Bulimia: its epidemiology and management. Psychiatr Annals 1983; 13:953–961
- Pope HG Jr, Hudson JÍ: New Hope for Binge Eaters: Advances in the Understanding and Treatment of Bulimia. New York, Harper & Row, 1984

FREDERICK S. WAMBOLDT, M.D.

Washington, D.C.

NADINE J. KASLOW, PH.D.

New Haven, Conn.

WILLIAM J. SWIFT, M.D.

Madison, Wis.

MARILYN RITHOLZ, PH.D.

Belmont, Mass.

Depression and Decongestants

SIR: Benzion Twerski, Ph.D. (1), suggested that two cases of major depression were actually organic affective syndromes secondary to the use of decongestant medication. I agree that this may indeed be the case, as we find this frequently on our neuropsychiatric evaluation unit. However, he reported on two patients using chlorpheniramine maleate and phenylpropanolamine hydrochloride (Ornade) and automatically attributed their affective symptoms to the

phenylpropanolamine hydrochloride, a sympathomimetic. As he correctly noted, there are numerous case reports of mania and psychosis that appear to be related to sympathomimetic use.

Dr. Twerski apparently disregarded the effect that chlorpheniramine maleate, a potent antihistamine, can have on the CNS. We have seen numerous cases of depression that, if not secondary to the use of antihistamines, appeared to be exacerbated by their use. Antihistamines are quite sedating in most people; they also have marked antiserotonin properties, which may cause depressive symptoms through inhibition of this important mood-mediating neurotransmitter. Theoretically, it is possible that in one of the cases of depression reported, which was refractory to treatment with amitriptyline, chlorpheniramine maleate may have antagonized the effect of amitriptyline, a serotonin reuptake inhibitor. I agree that physicians should always consider over-the-counter medication as contributory to any symptoms reported by patients. Secondary affective disorders are grossly underdiagnosed and are commonly caused by drugs: prescribed, over-the-counter, and illicit.

REFERENCE

 Twerski B: Sympathomimetic-induced depression (letter). Am J Psychiatry 1987; 144:252

ROBERT P. CLIMKO, M.D. Princeton, N.J.

Dr. Twerski Replies

SIR: Dr. Climko makes a valid point in calling attention to the attribution of the depression to the phenylpropanolamine. While it is possible that the antihistamine component may have been a factor, review of the literature plus clinical experiences suggested otherwise. I do not challenge Dr. Climko's observations but encourage him to formally report them.

Hansell (1) stated, "We suspect that the basic interaction is between sympathomimetics and schizophrenia. In the case of cold pills, but not the diet pills, it might be the antihistamines that are offending, but we don't think so because we don't see the problem with antihistamines themselves." This statement was in a report relating to schizophrenia, not depression.

The literature contains numerous reports of central nervous system and psychotic reactions to phenylpropanolamine (2–4). A computer literature search as well as manufacturer and Food and Drug Administration files yielded no reports of depression attributed to either antihistamine or decongestant agents or of psychotic reactions to antihistamines. Attributing the observed depressions to phenylpropanolamine was justified.

Other clinical experiences might have influenced my report. The most recent was a 24-year-old woman who was clinically depressed, with poor affect, loss of appetite and libido, and classic sleep disorder. She had been using a variety of prescription medications for a chronic allergic condition. All contained decongestants: phenylpropanolamine, pseudoephedrine, or phenylephedrine HCl. Only one of these contained chlorpheniramine maleate; the others contained no antihistamine at all. Cessation of all of these medications was followed by complete remission of all depressive symptoms.

REFERENCES

- 1. Hansell N: Sympathomimetics and schizophrenia (letter). JAMA 1975; 234:1220
- Dietz AJ: Amphetamine-like reactions to phenylpropanolamine. JAMA 1981; 245:601-602
- Norvenius G, Widerlov E, Lonnerholm G: Phenylpropanolamine and mental disturbances. Lancet 1979; 2:1367-1368
- Bale JF, Fountain MT, Shaddy R: Phenylpropanolamine-associated CNS complications in children and adolescents. Am J Dis Child 1984; 138:683

 –685

BENZION TWERSKI, PH.D. Pittsburgh, Pa.

Schneider's First-Rank Symptoms

SIR: In his interesting paper "First-Rank Symptoms as a Diagnostic Clue to Multiple Personality Disorder" (1), Richard P. Kluft, M.D., pointed out that Kurt Schneider's first-rank symptoms have not been found to be pathognomonic of schizophrenia. While correct, this conclusion does not convey the intent or the importance of Schneider's work.

Schneider was interested in increasing the validity and the reliability of psychiatric diagnosis. He was also concerned with reducing the overuse of the diagnosis of schizophrenia (2, p. 5). Accordingly, he wished to clarify those symptoms which would be most useful in distinguishing schizophrenia from nonschizophrenia.

Schneider believed that diagnosis should be based primarily on symptoms. He asserted that "abnormalities of experience" (i.e., delusions and hallucinations) and "abnormalities of expression" (i.e., disturbances of speech, affect, and behavior) were the symptoms of greatest diagnostic significance (2, p. 132). He believed that disturbances of speech, affect, and behavior could be interpreted differently by different observers and were therefore relatively unreliable as diagnostic criteria. He also stated that delusions and hallucinations, if carefully and precisely elicited, were more objective and therefore more reliable for purposes of diagnosis.

Schneider further asserted that among the wide variety of abnormalities of experience reported by schizophrenic patients, a small number were relatively clearly distinguishable from phenomena that occur in "cyclothymia" (manic-depressive disorder) and nonpsychotic disorders. These abnormal experiences were therefore of "greatest importance" for the diagnosis of schizophrenia and accordingly were considered first-rank symptoms. All other abnormalities of experience, along with all abnormalities of expression, were considered second-rank symptoms. Schneider implied that in his extensive clinical experience, the first-rank symptoms were those which invariably occurred within a total clinical picture that indicated schizophrenia; they were therefore of high validity as well as high reliability for the diagnosis of schizophrenia (3).

As Dr. Kluft pointed out, Schneider postulated that the first-rank symptoms were sufficient but not necessary for the diagnosis of schizophrenia. The diagnosis could also be made in the presence of the florid and repeated occurrence of second-rank symptoms, including loose associations, flat affect, and less characteristic hallucinations and delusions.

Schneider emphasized that his ranking of symptoms referred specifically to their usefulness in diagnosis and had no relation to any theory of the disease (2, p. 133). He repeatedly emphasized the importance of considering the total

clinical picture in making a psychiatric diagnosis, and he acknowledged the occurrence of atypical cases. He also advocated continued scrutiny of his hypotheses and stated that "psychopathological concepts are built upon observation and have to be continually measured and tested against

Several of Schneider's clinical concerns are strikingly parallel to current clinical concerns, and his thinking has exerted an important influence on DSM-III. The widespread emphasis on the pathognomonic nature of the first-rank symptoms does not accurately reflect the value of his contribution.

REFERENCES

- 1. Kluft RP: First-rank symptoms as a diagnostic clue to multiple
- personality disorder. Am J Psychiatry 1987; 144:293–298 Schneider K: Clinical Psychopathology, 5th ed. New York, Grune & Stratton, 1959
- 3. Fox HA: Bleuler, Schneider and schizophrenia. J Clin Psychiatry 1978; 39:703-708

HERBERT A. FOX, M.D. New York, N.Y.

Dr. Kluft Replies

SIR: Dr. Fox observes that my exploration of the relationship between Schneider's first-rank symptoms of schizophrenia and the phenomenology of multiple personality disorder omits any description of "the intent or the importance of Schneider's work." He offers a summary of Schneider's orientation, beliefs, and contributions.

I concur with his observation and value his remarks. Given limited space to communicate my research and its findings, I did not discuss Schneider's work as a whole. I focused on those issues which appeared most relevant to a major problem in contemporary psychiatry: the widespread misdiagnosis and underdiagnosis of multiple personality disorder. In brief, I found that many of the symptoms Schneider (1) had described as pathognomonic for schizophrenia were common in multiple personality disorder; as a consequence, multiple personality disorder patients inadvertently might be misdiagnosed as suffering from schizophrenia. In fact, the presence of first-rank symptoms should cause multiple personality disorder to become a part of the differential diagnosis.

Our diagnostic criteria are the subject of ongoing study and revision. "Conclusions" remain subject to modification contingent upon further knowledge. As Schneider (1) observed in the quotation cited by Dr. Fox, concepts of psychopathology must be tested against actual clinical observations. The construct validity of many major systems of diagnostic criteria for schizophrenia, including Schneider's, remains unestablished (2). Sometimes our concepts exert a profound influence on our diagnostic criteria before they have been validated. Fenton et al. (2) observed that our best diagnostic systems still retain aspects that are more or less arbitrary; that concepts become influential or even "official" does not establish their accuracy.

In 1978 Dr. Fox (3) addressed a recurrent problem in descriptive psychiatry: many of the most important investigators of schizophrenia have built inadvertent internal contradictions into their central concepts, left crucial terms vaguely defined, or otherwise compromised the precision of their ideas and observations by failing to translate them into definitions that are understood and operationalized in a like manner by their numerous interpreters. Koehler (4) has studied the many different interpretations of Schneider's first-rank symptoms, which Schneider himself (1) did not describe in depth and detail.

The fact that such problems afflict valuable contributions does not diminish their value. Flawless diagnostic criteria and descriptive systems are not imminent. Recognizing the difficulties in the systems currently available signifies that our knowledge remains incomplete and stimulates further research efforts. One of the difficulties inherent in the Schneiderian criteria is their overlap with the clinical phenomena encountered in multiple personality disorder (see my article). Future researchers may succeed in refining the definitions of the first-rank symptoms so that their manifestations in the dissociative disorders become distinguishable from their expressions in schizophrenia. Conversely, they may find that such resolution proves impossible.

Dr. Fox rightfully calls attention to the fact that investigators may become identified with particular aspects of their work while the overall extent of their findings and their quality of thought remain insufficiently acknowledged. This may happen either because such issues cannot be addressed within the restricted confines of brief scientific articles that refer to them or because psychiatry in general may not accord them due recognition.

REFERENCES

- 1. Schneider K: Clinical Psychopathology, 5th ed. New York, Grune & Stratton, 1959
- Fenton WS, Mosher LR, Matthews SM: Diagnosis of schizophrenia: a critical review of current diagnostic systems. Schizophr Bull 1981; 7:452-476
- Fox HA: Bleuler, Schneider and schizophrenia. J Clin Psychiatry 1978; 39:703-708
- Koehler K: First rank symptoms of schizophrenia: questions concerning clinical boundaries. Br J Psychiatry 1979; 134:236-

RICHARD P. KLUFT, M.D. Philadelphia, Pa.

Mania and Head Trauma

SIR: The report "Mania Following Head Trauma" by Sashi Shukla, M.D., and associates (1) was especially relevant to the population we serve at our community mental health agency. Having seen several cases of recurrent mania without depression—without a family history of bipolar illness or schizophrenia and characterized by an irritable mood and assaultive behavior—in patients who had experienced a moderate or severe coma due to a head injury, we fully concur with the authors' findings.

Our study group investigated the prevalence of episodes of loss of consciousness in 36 control, 36 anxious nonpsychotic, and 36 psychotic black subjects. Ten (27.8%) of the control subjects reported at least one episode of unconsciousness, compared to 19 (52.8%) of the anxious nonpsychotic and 20 (55.6%) of the psychotic patients. Only one control subject reported an episode of unconsciousness that was severe (lasting more than 24 hours), compared to three anxious nonpsychotic and three psychotic patients. Only one control subject had had an episode of coma in childhood, and this was mild in severity (lasting less than 30 minutes). Ten of the anxious nonpsychotic and eight of the psychotic subjects had had episodes of coma in childhood, and all of them were either moderate (lasting more than 30 minutes but less than 24 hours) or severe in duration (2).

Of the total of 72 anxious nonpsychotic and psychotic patients we studied, 40.3% reported having been unconscious due to head trauma. Approximately 18% of our patient sample reported a head injury that caused a period of unconsciousness for more than 30 minutes. Because our clinical sample was selected at random from our outpatient psychiatric population, we were a bit surprised at the large number of reports of head trauma. However, considering that minority, inner-city populations are more at risk for head injury (3) and that poor patients with posttraumatic organic psychiatric disorders may "drift" into public mental health services, our findings may be replicable and accurate. Unfortunately, a review of the literature did not yield a study with which we could compare our findings.

We believe the finding of Dr. Shukla and associates that posttraumatic mania presents a different clinical picture from that of functional bipolar illness is a very important one. Our experience has been that such patients require a modification of the standard treatment approach to patients with functional bipolar illness. Education is often an important aspect of treatment in the latter group of patients; however, due to the intellectual deficits often seen in posttraumatic manic patients, education as an adjunct is less fruitful. Much more family support needs to be enlisted for the posttraumatic manic patient, similar to that which is needed in the rehabilitation of patients with severe head injuries. In addition, the posttraumatic manic patients we have seen seem to be less tolerant of lithium therapy, and some do much better with low doses of loxapine and propranolol, since these reduce the patient's irritability and assaultiveness. We wonder whether the authors would agree with a modified treatment approach that combines aspects of the standard medical management of manic symptoms and the rehabilitation of the brain-injured patient.

Finally, we think the paper by Dr. Shukla and associates is important because they propose a relationship between posttraumatic states and manic symptoms, and because poor members of minority groups are at risk for head injuries they may be at greater risk for developing organic affective syndromes. It may well be that poor, minority-group members more frequently have an organic component of their bipolar illness, thus obscuring the accuracy of their diagnosis (4).

REFERENCES

- Shukla S, Cook BL, Mukherjee S, et al: Mania following head trauma. Am J Psychiatry 1987; 44:93–96
 Bell CC, Thompson B, Shorter-Gooden K, et al: Prevalence of
- Bell CC, Thompson B, Shorter-Gooden K, et al: Prevalence of coma in black subjects. J Natl Med Assoc 1985; 77:391–395
 Rivara FP, Mueller BA: The epidemiology and prevention of
- Rivara FP, Mueller BA: The epidemiology and prevention of pediatric head injury. J Head Trauma Rehabilitation 1986; 1:7-15
- Jones BE, Gray BA, Parson EB: Manic-depressive illness among poor urban blacks. Am. J Psychiatry 1981; 138:654–657

CARL C. BELL, M.D. BELINDA THOMPSON, PH.D. BAMBADE SHAKOOR, M.S. Chicago, 1ll.

Dr. Shukla and Associates Reply

SIR: We were interested to read that Dr. Bell and his colleagues have evaluated and treated patients with mania

following head trauma who had clinical presentations similar to what we described. They also report their own findings of an association between anxious nonpsychotic and psychotic states and head trauma and unconsciousness. While these data may imply a sample bias, as they suggest, they also point to the importance of ascertaining such histories in psychiatric patients in general. We fully agree with Dr. Bell and associates' treatment approach to patients with mania following head trauma. Our own experience has been similar in that we have tailored treatment to each patient's needs. Such strategies have included cognitive rehabilitation, education and involvement of family members, and "atypical" pharmacologic approaches. We recently reported that these patients, among others with neurologic histories, are more likely to be resistant to lithium therapy, to respond to carbamazepine therapy, and to have neurotoxic drug reactions than bipolar patients with no history of neurologic dysfunction ("Treatment Outcome in Organic Mania," by Shukla et al., presented at the 140th annual meeting of the American Psychiatric Association, Chicago, May 9-14, 1987).

> SASHI SHUKLA, M.D. BRIAN COOK, D.O. SUKDEB MUKHERJEE, M.D. CHARLES GODWIN, M.D. MORTON MILLER, M.D. Stony Brook, N.Y.

Symptom Definition in Evaluation of Globus

SIR: The article "Globus Hystericus Syndrome Responsive to Antidepressants" (1) by Susan R. Brown, M.D., and associates was interesting but problematic in several respects. It purported to show an improvement of globus symptoms in three patients when antidepressants were given. Although the case reports were quite detailed, it is not clear that any of the patients actually experienced what is usually meant by the "globus" designation. The definition chosen by the authors emphasized that patients "fear that they are intermittently choking and unable to breathe. . . . They may become profoundly disabled or may develop life-threatening weight loss." This is not the essence of globus but highlights separate symptoms that are best thought of as distinct from globus.

Globus, as defined by most authors, refers to the sensation of a lump in the throat—often with a feeling of tightness (2). Although globus can subjectively and transiently worsen efforts at swallowing, and vice versa, usually this is not of great significance (3). Most authors distinguish globus from true dysphagia with weight loss (specifically excluded) and other swallowing disorders on a functional basis (4). What these patients had in common was a profound fear of choking (with significant weight loss in two) that necessitated psychiatric hospitalization. Patients 1 and 2 had notable and relevant past histories of emotional disturbances, including panic attacks or agoraphobia, and a current depressive disorder. Patient 3 had Alzheimer's disease and "spontaneously" developed a fear of choking. Only patient 1 had any reported throat symptoms (tightness) whatsoever. Such symptoms as these do not conform to the descriptions of globus patients offered by other authors; they indicate one of the disorders of deglutition or severe psychopathology, but not globus (4, 5). Malcolmson did not report this symptom pattern in his series of more than 300 patients (2, 4).

The authors correctly noted that there is controversy in the literature about the etiology of and diagnostic criteria for globus. Nevertheless, their use of the term "syndrome" is puzzling, as is their inclusion of dysphagia-like and phobic symptoms. The authors actually mentioned the conventional definition but then did not adhere to it. One of the papers they cited contains the same central difficulty (6). Globus may be quite common among normal people (3) and also be a symptom with heterogeneous medical (4, 5) and psychophysiologic meanings (e.g., acute blocked emotion). Some writers favor discarding the epithet "hystericus" (4).

It is difficult to draw any general conclusions from this highly selected and atypical group. Since only one patient had reported throat symptoms of any kind, it is even more difficult to infer the role of the throat symptom in the genesis of the patient's actual disorder. These issues of definition and conceptualization are important. What Dr. Brown and her associates demonstrated is that antidepressants may be effective for depressive disorders and certain severe phobic conditions. This article, if taken at face value, might lead clinicians to use antidepressants with numbers of patients who do have more typical globus, a treatment approach that remains unstudied.

REFERENCES

- Brown SR, Schwartz JM, Summergrad P, et al: Globus hystericus syndrome responsive to antidepressants. Am J Psychiatry 1986; 143:917-918
- Malcolmson KG: Radiological findings in globus hystericus. Br J Radiol 1966; 39:583–586
- Thompson WG, Heaton KW: Heartburn and globus in apparently healthy people. Can Med Assoc J 1982; 126:46–48
 Malcolmson KG: Globus hystericus vel pharyngis (a reconnais-
- Malcolmson KG: Globus hystericus vel pharyngis (a reconnaissance of proximal vagal modalities). J Laryngol Otol 1968; 82:219–230
- Weisskopf A: Reflux esophagitis: a cause of globus. Otolaryngol Head Neck Surg 1981; 89:780-782

 Solyom L, Sookman D: Fear of choking and its treatment. Can J Psychiatry 1982; 25:30–34

J. PETER STRANG, M.D.
Boston, Mass.
ROCHELLE L. KLINGER, M.D.
Richmond, Va.

Dr. Brown and Colleagues Reply

SIR: Whenever a term such as "globus hystericus" is used to describe clinical situations, there is room for confusion. Clearly, globus hystericus means something different to various individuals, and there is, as acknowledged by Drs. Strang and Klinger, no standard definition that all can agree upon.

In light of this, we feel that it is best to describe individual patients in as much detail as possible, so that the interested reader can draw his or her own conclusions. We outlined the case histories of three patients who responded quite well to antidepressants. We will not rehash our discussion of the relationship of their symptoms to depression, since this is covered in our paper.

The caution that our article, "if taken at face value, might lead clinicians to use antidepressants with numbers of patients who do have more typical globus" seems of little consequence. Since there is so little information on this subject, we feel that a trial of antidepressants is indeed warranted and subjects the patient to negligible danger, with some possibility of benefit. We agree that this treatment approach should be further studied.

SUSAN R. BROWN, M.D. MICHAEL A. JENIKE, M.D. PAUL SUMMERGRAD, M.D. JULIA M. SCHWARTZ, M.D. Boston, Mass.

Reprints of letters to the Editor are not available.



The following are edited versions of the reports by the APA Secretary, Treasurer, Medical Director, Speaker, Speaker, Elect, and chairpersons of the Committee on Constitution and By-Laws, Committee on Membership, and Committee of I lers to the annual business meeting in Chicago on May 11, 1987. The annual report of the American Board of Psychiery and Neurology, Inc., appeared in the August 1987 issue of the Journal.

Report of the Secretary: Summary of Actions of the Board of Trustees, May 1986–May 1987

It is my personal and Constitutional privilege as Secretary to report to the membership the actions taken by the Board over the past year. The summary of actions is arranged in alphabetical order according to topic. The actions reported do not include a number of issues referred to appropriate components for further study and recommendation. As prescribed by our Constitution, especially important issues will be discussed and clarified at our annual meeting and a full report will be published in the *American Journal of Psychiatry*.

As of Jan. 1, 1987, APA had more than 33,000 members, a net gain of 4.6% in 1986. The more than 5,000 Members-in-Training represent 15.2% of the total membership and about 92% of the psychiatric residents in the country. The Members-in-Training and the 605 Medical Student members together constitute 17.1% of the total membership. Members-in-Training have held nonvoting positions on the Board by having representatives from the Committee of Residents and the resident fellowship programs. If an amendment on the 1987 ballot passes, the Board will have a voting Member-in-Training Trustee and a nonvoting Member-in-Training Trustee-Elect beginning with the 1988 election. It is gratifying that the district branches have developed active outreach programs for the recruitment and involvement of residents and that the Assembly now has seven resident representatives and seven deputy resident representatives who are also voting members of their respective Area councils.

My report to you in May 1986 noted the establishment of a separate corporation to handle APA's professional liability insurance for members. In November 1986 Professional Risk Management Services, Inc., was established and replaced the former APA Office of Member and Staff Benefits. As of Jan. 31, 1987, there were almost 11,000 participants in APA's Professional Liability Insurance Program. Renewal information was mailed early in March; this year there was a 15% rate increase based on the cost of reinsurance and actuarial review of the program. The Member Life, Accident, and Health Insurance Program continued to increase in membership.

The 1987 APA budget was considered at the meeting of the Board in September and approved in December 1986. During the recent austere budget years, new or expanded programs were pared to a minimum; this, however, could not continue in the long term if APA were to adequately address the broad, complex issues facing the Association and its members. In September the Board approved a 10% dues increase to ensure improved services to the membership.

In December the Board discussed fine-tuning of the 1987 of figer and approved the operating budget, with income and expense alike, of \$18.5 million, representing an increase of 5.8% over the 1936 level (beyond inflation) for new and expanded programs for A 'A members and their patients. The report of the Treasurer further comments on this and emphasizes APA's increased fiscal stability.

Several APA components and staff worked together with the Board and the Assembly to produce a revision of DSM-III. Frimarily involved were the Work Group to Revise DSM-III and and how committee of the Assembly and the Board to review the most suscript Publication is scheduled for May 1987. In the summary actions you will note that issues related to this revision were discussed at length during the past year and that drafts of the book were available for review. Final approval was given by the Board in December after careful review and discussion.

A similar process is in place for developing the report of the Tasl. Force on Treatments of Psychiatric Disorders. A joint ad how committee of the Assembly and the Board is assisting controversial issues, and careful review is taking place within the task force. Approximately 300 task force consultants are providing a wide range of expertise, and other interested groups are commenting on aspects of the manuscript. Concerns were raised early in 1986 that the task force report would be seen as official policy of the Association; however, it has been clarified that the work will not represent APA policy but, rather, will be a report concerns therapies. A statement that the report is primarily for the surface of psychiatric clinicians will be included in the publication.

The National Marketing and Education Project was established in May 1985 when GLS Associates was a consulting firm. During the project's first 2 years efforts began to establish successful marketing practices within the national attraction and its branches and included data collection and regional seminars. The strategic plan for 1987 includes educational activities for an arrangement in the district branches (including staff and providing technical assistance. Instead of regional seminars present local programs in collaboration with the district and will present educational activities nationally at the Annual meeting and for the orientation of district branch presidents and staff. The Committee on Financing and Marketing attains the Council on Economic Affairs has been requested by the Coard and Assembly to identify and evaluate the goals and directions of the program during the coming year.

Cost reduction or containment efforts by the government, employers, and third-party payers continued to have a major impact on the services available to patients. Alternative health care delivery systems continued to proliferate. In December 1986 the APA Office of Quality Assurance entered into a new contract year with the Department of Defense for management of the CHAMPUS utilization review of mental health services. The APA/Intracorp psychiatric review program has expanded rapidly to include outpatient review. The Council on Economic Affairs and its Committee on Quality Assurance have reorganized to provide additional oversight of APA's programs and to handle expansion of the programs. The Council on Psychiatric Services is planning a conference on organized and managed health care settings.

In alternate years the Joint Commission on Government Relations and the Division of Government Relations sponsor state and federal legislative institutes. In March 1987 a federal institute was held in Washington, D.C., with representatives from 54 of the 76 district branches. The institute provided for important interactions between APA members and their representatives in Congress; a reception was held at the Rayburn House Office Building and was hosted by Senators George Mitchell, David Durenberger, and Joseph Early and Representatives Henry Waxman, William Gradison, and Edward Madigan. Senators Robert Dole and Spark Matsunaga and Representative Thomas Downey were the keynote speakers at a dinner meeting. In 1986 additional funds were allocated to support increased attention to state issues in the Division of Government Relations. The APA State Issues Handbook has been prepared for circulation to the district branches, and an additional staff person has been added in the Division of Government Relations to handle state issues.

The APA Physicians Awareness Campaign, sponsored by the Joint Commission on Public Affairs to improve psychiatry's relationships with the rest of medicine, is off and running. Two major components are already in place. The personal planning calendar featuring Dr. Robert Pasnau's cartoon-illustrated "Twelve Commandments of Etiquette for Psychiatrists" is now being distributed to members by the Upjohn Company, which funded the project, and by the APA Division of Public Affairs. The Medical Community Interactive Workshops have been funded by Boots Pharmaceuticals, Inc., and are scheduled to begin with three pilot projects in April and May 1987. During 1987 and 1988, 100 workshops, each sponsored by a district branch, are planned. The workshops are designed to promote interaction between psychiatrists and primary care physicians on the subject of depression. In addition, the program will incorporate information from the AMA suicide prevention project. In 1986, in recognition of Mental Illness Awareness Week, the Joint Commission on Public Affairs and the Division of Public Affairs planned and initiated highly successful local public information and education campaigns across the country, involving many organizations and institutions. Expanded activities are planned for Mental Illness Awareness Week in 1987

An ad hoc committee of the Board has been involved in a careful study of APA's many and varied liaison activities, including their cost and benefit to APA and the need to continue or establish liaisons. An issue related to liaison activities that received considerable attention from the Board was subspecialization. An ad hoc committee of the Board and the Assembly has been established to further study the issue.

The actions of the Board reflect a number of international activities. APA joined with the U.S. State Department and the American Bar Association to develop and present a conference on problems of Americans living overseas. A number of human rights issues were addressed. APA responded to the "Daes Report," indicating that the publication and dissemination of the report does a great disservice to mental patients because of its lack of perspective and balance and its failure to take into account important advances in the treatment of the mentally ill. APA supported ratification of the United Nations Convention on Elimination of All Forms of Discrimination Against Women.

The joint Reference Committee is a key element in the governance structure of the Association. It brings together three representatives from the Assembly, three representatives from the Board, and the Medical Director as voting members; the chairpersons of councils,

joint commissions, and commissions report to the joint Reference Committee and participate actively in its deliberations. It synthesizes and coordinates agenda items coming from the Assembly, the Board, and other components, referring the issues as appropriate. In addition, it collates recommendations that require action by the Board and Assembly.

Every member of APA is privileged to attend any session of the components of the Association except for meetings of the Ethics Committee and Ethics Appeals Board and for executive sessions of components. Your strong support is deeply appreciated; your recommendations for consideration by the Board or other components are most welcome.

The Board took the following actions.

ABPN

1. Renominated Layton McCurdy, M.D., for a second 4-year term as a director of the American Board of Psychiatry and Neurology (ABPN) (Sept. '86).

Advocacy Office

1. Considered the Assembly's request for a study of the feasibility of developing an advocacy office and suggested that a pilot project be considered in further discussions. Referred this issue to the Joint Commission on Public Affairs, joint Reference Committee, and Medical Director; it was further discussed by the Assembly Executive Committee, which formed a small study group to explore the scope of such a project and establish criteria for it. The Assembly will consider the matter further at its May 1987 meeting (Dec. '86).

AIDS

- 1. Authorized APA to contact the organizers of the Third International Conference on AIDS (June 1–5, 1987, in Washington, D.C.) to recommend that contributions from psychiatrists working with human immunodeficiency virus (HIV) disease be included in the scientific presentations at the conference (Sept. '86).
- 2. Adopted a position statement on the acquired immune deficiency syndrome (AIDS) (American Journal of Psychiatry, August 1987), as approved by the Assembly, and voted to reinstate the following sentence: "Psychiatrists should work actively and effectively to counteract inappropriate reactions to HIV disease in their communications and professional activities." (Dec. '86).

 3. Adopted a position statement on HIV-related discrimination
- 3. Adopted a position statement on HIV-related discrimination (*American Journal of Psychiatry*, August 1987), as approved by the Assembly (Dec. '86).

Amendments to Constitution and By-Laws

- 1. Approved amendments to chapters 6.5, 8.5, and 9.1 of the By-Laws—which would change the deadlines for receipt of petitions and reporting by the Nominating Committee—for reading to the membership at the 1987 annual meeting and placement on the 1988 ballot (Dec. '86 and March '87).
- 2. Approved an amendment to article IX of the By-Laws—to increase from 50 to 200 the required number of signatures on a referendum—for reading to the membership at the 1987 annual meeting and placement on the 1988 ballot (March '87).
- 3. Ratified the Executive Action approving the wording of By-Laws amendments regarding a Member-in-Training Trustee and Member-in-Training Trustee-Elect, which were proposed by the Committee on Constitution and By-Laws and were included on the agenda for the 1986 business meeting and on the 1987 ballot (May '86).
- 4. Approved a specific process for nomination of residents for Member-in-Training Trustee and Member-in-Training Trustee-Elect (Dec. '86 and March '87).

American Journal of Psychiatry

1. Reappointed Drs. Toksoz B. Karasu and Judith Rapoport to their second 4-year terms as Associate Editors of the Journal and

appointed Dr. Kenneth L. Davis to a 4-year term as Associate Editor (March '87).

American Medical Association

- 1. Voted to encourage all appointees to APA components to join AMA or remain AMA members (Dec. '86).
- 2. Ratified the Executive Action approving an APA contribution of \$3,500 to the AMA Project on Professional Liability and Insurance (Sept. '86).
- 3. Authorized a survey of district branches to identify those involved in county or state medical societies and to convene a meeting of these persons at the 1987 annual meeting to encourage participation by psychiatrists in organized medicine (June '86).

Annual Meeting

- 1. Changed, on a trial basis, the schedule for the opening session and business session at the annual meeting; approved significant publicity to announce this change, which took effect in 1987 (June '86).
 - 2. Changed the day for closing exhibits to Wednesday (June '86).
- 3. Empowered the Medical Director to handle a violation of regulations by an exhibitor (Dec. '86).
- 4. Approved, on a trial basis, a more lenient policy on giveaways in the annual meeting exhibit area; the Committee on Advertisers and Exhibitors will perform an in-depth evaluation after the 1987 annual meeting (Dec. '86).
- 5. Authorized the Committee of Asian-American Psychiatrists to seek outside funding for a reception at the 1987 annual meeting (June '86).
- 6. Authorized the Committee on Women to seek outside funding for a hospitality suite at the 1987 annual meeting (June '86).
- 7. Approved a policy prohibiting smoking in scientific sessions at the 1987 annual meeting (Dec. '86).
- 8. Increased the fees for commercial symposia, effective with the 1987 annual meeting (June '86).
- 9. Approved the following registration fee structure for the 1988 annual meeting: members of the Canadian Psychiatric Association and the Quebec Psychiatric Association will be charged the same fee as APA members, all Canadian psychiatry residents will be charged the same fee as U.S. psychiatry residents, and medical students from Canadian medical schools will pay no registration fee, which is the same as for medical students from U.S. schools (March '87).

APPI

- 1. Approved Drs. Melvin Sabshin and Shervert Frazier for reappointment and Drs. William Sorum and Robert Pasnau for appointment to the Board of Directors of American Psychiatric Press, Inc. (APPI) (May '86).
- 2. Approved in principle the cosponsoring of an international journal of social psychiatry to be published by APPI (March '87).

Awards

- 1. Ratified the selection of recipients for the 1987 APA Distinguished Service Awards: Drs. Henry Brosin and Robert J. Campbell for the individual awards and the American Association of Directors of Psychiatric Residency Training for the institutional award (Dec. '86).
- 2. Commissioned an artist to design a commemorative memento for the Warren Williams Speaker's Award (June '86).
- 3. Terminated the trust governing the bequest of Madelline Ellis for the Bond, Strecker, Appel Award (June '86).
- 4. Established the Jacob K. Javits Public Service Award with a \$1,000 honorarium to be funded by the Joint Commission on Government Relations and presented at a state legislative seminar or federal legislative institute (Dec. '86).
- 5. Accepted a bequest from the estate of Dorothy C. Kempf for establishment of an award (June '86).
- 6. Approved changes in the wording of the Robert T. Morse Writer's Award and the Robert L. Robinson Award (June '86).

- 7. Approved revisions to the media awards: District Branch Newsletter of the Year award, Francis J. Braceland Award & Public Service, Robert T. Morse Writer's Award, and Robert L. R. pinson Award (Dec. '86).
- 8. Ratified the Executive Action modifying the guideline for the APA/Pennwalt Resident Research Award to provide avairds of \$1,500 to each of two residents and \$1,000 to each parent department and to eliminate travel funds (Dec. '86).
- 9. Approved changes in the policies and procedures of APA awards, including a) placement of the responsibility for unding awards and monitoring funds with the award boards, b) not fication of winners by the President, and c) a February 1 deadl not for all winners who do not give lectures (Dec. '86).

Benefits

- 1. Approved in principle the creation of a corporation to conduct activities related to member and staff benefits; authorized saff and legal counsel to formulate a comprehensive plan and report back in September (June '86).
- 2. Authorized APA to be a shareholder in Professio I Risk Management Services, Inc., established on Nov. 1, 1986 f slow-up to Board action in June 1986) (Sept. '86).
- 3. Appointed Dr. Alan Levenson as the APA Board of rustees member of the Board of Directors of Professional Risk Mail gement Services and authorized APA to indemnify and hold hard ess Dr. Levenson against any judgments, suits, or claims (including to costs of a legal defense) related to this role (Dec. '86).
- 4. Established a Board committee to work with Dr. Leve son and provide liaison with Professional Risk Management Servi s, Inc.; requested this liaison committee to determine the best ratio had for the corporation to report to the APA Board of Trustees (1 c. '86).

Budget/Planning

1. Approved continuing the invitation of the Speaker, beaker-Elect, and chairpersons of the Assembly Committees on hanning and on Fiscal Policy to meetings of the Constitutiona Budget Committee (Dec. '86).

Child Psychiatry

- 1. Approved the nominations of Drs. Lenore Terr, Min Dulcan, and Kenneth Robson to the Committee on Certification of Childen Psychiatry (Dec. '86).
 - 2. Approved Essentials for Child Psychiatry (Dec. '86)

Components

1. Established the following components. Board of Trustees Components-Editorial Review Panel (Sept. and Dec. '86 Ad Hoc Committee to Study the Role, Composition, and Function of the Joint Commissions (Dec. '86), Ad Hoc Committee on Subsectialization tion (Dec. '86), Professional Risk Management Services, son Committee (Dec. '86), Ad Hoc Committee to Review and Select Questions for the 1987 Candidates (June '86), and Ad I oc Committee to Review the Role of the Office of Economic Affai, and the National Marketing and Educational Program (March '87 Council Components—Council on Aging: Task Force on Ethnic Amorit Elderly (March '87); Council on Children, Adolescents, and Theorems. Families: Committee on Family Violence and Sexual Alase (De., '86); Council on International Affairs: Task Force on ne International Education Project (June '86), Task Force on errorism (Dec. '86), Task Force to Plan a Joint Meeting in China (. thorized Dec. '84, appointments in 1986); Council on Nation Committee on Psychological Aspects of Nuclear Arms De Alopment (Dec. '86), Corresponding Task Force on Victimization (Varch '87; Council on Research: Committee on Psychiatric Diagnosis and Assessment (Dec. '86), Committee on Science Policy (ec. '86, Committee on Research on Psychiatric Treatments (Des. 96), Tas & Force on Prevention (Dec. '86). Joint Commission Component— Joint Commission on Public Affairs: District Branch Ne sletter of the Year Subcommittee (June '86).

- 2. Renewed the following components: Ad Hoc Committee to Develop a Slate of Candidates for Election to the ABPN, Ad Hoc Committee on the Timing of the Annual Meeting, Ad Hoc Committee on Elections, Ad Hoc Committee on Liaison Activities, Ad Hoc Committee to Review Treatments of Psychiatric Disorders (June '86).
- 3. Made the following changes to existing components---Council on Internal Organization: changed the name of the component on annual meeting exhibits to Subcommittee on Scientific and Educational Exhibits (June '86), changed the title of the House Committee to Headquarters Committee and changed its charge (Dec. '86); Council on Medical Education and Career Development: increased the full voting membership of the Committee of Residents to seven, one member from each APA geographic area (Dec. '86); Work Group on Federal Government Organizational Structure: authorized the Medical Director and President to reenergize and reconstitute the work group as needed to address current issues in governmental structure (March '87).
- 4. Discharged the following components. Board of Trustees Components—Ad Hoc Committee on APA/APPI Relationships (June '86), Ad Hoc Committee on Conflict of Interests (June '86), Board of Trustees Fiscal Oversight Committee (June '86), Ad Hoc Committee on a Resident Vote on the Board (June '86). Council Components—Council on Aging: Task Force on the Interface of Psychiatry and Medicine (Dec. '86), Task Force on Forensic Issues in Geriatric Psychiatry (June '86); Council on Children, Adolescents, and their Families: Task Force to Study Psychiatry and Child Abuse (Dec. '86), Task Force on Changing Family Patterns (Dec. '86); Council on International Affairs: Task Force to Plan a Joint Meeting in Africa (Dec. '86); Council on Research: Committee to Evaluate DSM-III (Dec. '86).

Consortiums

- 1. Endorsed APA's participation in efforts to establish a consortium to develop collaboration between state mental health administrators and medical school departments of psychiatry (Dec. '86).
- 2. Authorized APA to convene an intersociety consortium to address educational issues and authorized funding for APA representatives to attend the meetings of this group; referred two issues to this consortium for consideration: a) development of a critical incidents examination and 2) development of career tracks for academic psychiatrists (Dec. '86).

Council on Medical Specialty Societies

1. Authorized APA to participate in the Council on Medical Specialty Societies' study of the effects of diagnosis-related groups (DRGs); authorized spending up to \$1,000 of the Board's contingency fund to support the project (Dec. '86).

CPT-4

- 1. Considered issues related to the AMA's Physicians' Current Procedural Terminology, 4th edition (CPT-4); requested that representatives of the Committee on Private Practice and the Task Force on Psychiatrist Payment and other consultants hold a special meeting early in 1987 to devise a plan for APA and other organizations, e.g., the ABPN and the Residency Review Committee for Psychiatry, to work in conjunction with the AMA to encourage the Health Care Financing Administration to develop consistent interpretation of the CPT codes by fiscal intermediaries (Dec. '86).
- 2. Approved long-term and short-term procedures for the plan to encourage consistent interpretation of CPT-4; approved recommendations for teaching APA members to use CPT-4 (March '87).

DSM-III-R

- 1. Approved inclusion of the following in appendix A of DSM-III-R: "Periluteal Phase Dysphoric Disorder," "Sadistic Personality Disorder," and "Self-Defeating Personality Disorder" (June '86).
- 2. Approved six amendments to appendix A of DSM-III-R, including the following: a) change in the name of the appendix, b)

- removal of "Self-Defeating Personality Disorder," "Sadistic Personality Disorder," and "Other Disorders Associated with Physiologic Functions," c) upgrading of "Sleep Disorders" to a major diagnostic class, d) revision of the text for "Other Personality Disorder," and e) addition of notes for coding for three disorders (Dec. '86).

 3. Excluded "Paraphilic Coercive Disorder" from DSM-III-R
- (June '86).
- 4. Removed "Ego-Dystonic Homosexuality" (code 302.00) from DSM-III-R (June '86).
- 5. Approved a cautionary statement for inclusion in the introduction and listing in the table of contents of DSM-III-R and Diagnostic Criteria From DSM-III-R ("Mini-D") (Dec. '86).
- 6. Approved the report of the Work Group to Revise DSM-III as amended; instructed the work group to prepare the text, with the understanding that no further movement or addition of categories would be permitted (June '86).
- 7. Approved eight technical revisions to the final draft of DSM-III-R, including a change from "Primary Degenerative Dementia" to "Primary Degenerative Dementia of the Alzheimer's Type" (no change in code); amendments to the criteria for "Adjustment Disorder," "Alcoholic Hallucinosis," "Intermittent Explosive Disorder," and "Eating Disorders"; restoration of the diagnosis of "Identity Disorder"; and a change from "Psychogenic Pain Disor-
- der" to "Somatoform Pain Disorder" (Dec. '86).

 8. Approved the final draft of DSM-III-R (including the revised introduction) as submitted by the Ad Hoc Committee to Review DSM-III-R with its review and approval; voted that the title would be Diagnostic and Statistical Manual of Mental Disorders (Third Edition Revised)—DSM-III-R (Dec. '86).

Editorial Review Panel

- 1. Authorized development of an APA policy on publication of APA conference reports and other nonofficial materials, for final Board action in December 1986 (Sept. '86).
- 2. Approved the process recommended by the Editorial Review Panel for publication of APA educational/informational materials, reports of APA-sponsored conferences, etc.; requested the panel to provide the Board with a status report in 1-2 years (Dec. '86).

Elections

- 1. Ratified the results of the 1986 election: Dr. George Pollock, President-Elect; Dr. Herbert Pardes, Vice-President; Dr. Alan Levenson, Treasurer; Dr. Philip Margolis, Trustee-at-Large; Dr. Chester Schmidt, Area III Trustee; and Dr. Fred Gottlieb, Area VI Trustee (May '86).
- 2. Authorized disposal of the ballots from the 1986 election immediately after the 1986 annual meeting (May '86).
- 3. Voted to receive the report of the Ad Hoc Committee on Elections and to send the report to the Assembly for further discussion; the report reconfirmed the basic policies on elections and reiterated the role of district branches and their newsletters in the election process (Sept. '86).
- 4. Approved changes to sections II.C.2 and II.C.4 of the election guidelines (June '86).
- 5. Changed the date given in the Operations Manual of the Board of Trustees for mailing ballots from Feb. 10 to Feb. 20 (Dec. '86).
- 6. Changed the voting period from 52 calendar days after the day the ballots are mailed to 42 calendar days after the day the ballots are mailed (Dec. '86).
- 7. Approved producing videotapes in an interview format of the 1987 candidates for President-Elect as a pilot project (June '86).
- 8. Encumbered up to \$4,000 from the 1986 Board contingency fund to pay for the production and distribution of videotapes of the candidates for President-Elect in the 1987 election; amended the June 1986 action to permit free distribution of the videotapes to the district branches (Sept. '86).

Ethics

1. Approved duplication and distribution of a videotape (with a discussion leader's guide) produced by the Subcommittee on Educa-

tion of Psychiatrists on Ethical Issues and the APA Office of Education (Sept. '86).

- 2. Requested the Ethics Committee to study and report back on the issues raised in the November 1986 Assembly Action Paper VI, number 2, which presents guidelines for psychiatrists' signatures (Dec. '86).
- 3. Revised the Operations Manual wording regarding suspension of an APA member's license to practice medicine (i.e., suspension should not automatically affect membership status but, rather, trigger an investigation by the district branch; membership status should depend on the outcome of that investigation) (Dec. '86).

Family Patterns

1. Approved publication of the task force report "Changing Family Patterns in the U.S." and acknowledged the editing of the Council on Children, Adolescents, and Their Families (Dec. '86).

Fiscal Matters

- 1. Approved the APA 1987 operating budget of \$18.5 million (income and expenses) and allocated \$25,000 from the Board contingency fund to support some of the activities approved in December 1986 and to assist with further fine-tuning of the budget
- 2. Approved the establishment of a checking account at the Lakeside Bank in Chicago for use during the 1987 APA annual meeting (March '87).
- 3. Approved a resolution to indemnify members of the Investment Advisory Committee and the staff employees involved in investing and reinvesting Association funds and to clarify the responsibilities of the Investment Advisory Committee (June '86).

4. Approved loans from the National Bank of Washington, as recommended by the Treasurer (May '86).

- 5. Reaffirmed authorization of the Medical Director to appoint a Deputy Medical Director to execute contracts or agreements or to make other representations on behalf of APA when the Medical Director is unavailable, with the understanding that Dr. Carolyn Robinowitz will be the Deputy Medical Director who primarily carries out this responsibility (March '87).
- 6. Approved additional appropriations to the Division of Public Affairs for two additional public affairs assistant positions (Dec. '86).
- 7. Supported the Resource Development Committee's exploration of establishing an APA foundation and office of development with the provision that the committee will report back to the Budget Committee (Sept. '86).
- 8. Updated the authorized signatories to include the new Treasurer (June '86).

Forensic Psychiatry

- 1. Received a published copy of the report of the Task Force on Forensic Issues in Geriatric Psychiatry and discharged the task force with thanks (June '86).
- 2. Endorsed development of a handbook for psychiatric practice in the juvenile justice system by the Task Force on Juvenile Justice Issues and the Council on Children, Adolescents, and Their Families and authorized the task force and council to seek outside funding for this project (March '87).

Foster Care

1. Approved the position statement on discrimination in the selection of foster parents approved by the Assembly (American Journal of Psychiatry, November 1986) (June '86).

Shervert Frazier

1. Voted to send a letter to Dr. Shervert Frazier expressing the Board's appreciation for his contributions to psychiatry during his tenure as Director of the National Institute of Mental Health (Dec. '86).

H&CP Institute

1. Approved a new fee schedule, beginning in 1987, for the Hospital & Community Psychiatry Institute (Dec. '86).

Insurance

- 1. Ratified the Executive Action authorizing APA to obtain professional liability insurance coverage (directors and officers) from National Union Fire Insurance Company; rescinded indemnification relative to judgments, suits, or claims (approved in March 1986) with the understanding that this action did not rescind the Board's ratification of the May 1, 1986, Executive Action that assumed responsibility for the \$750,000 deductible on behalf of anyone who is covered by APA's new professional liability insurance policy (May
- 2. Authorized APA to purchase from Psychiatrists' Mutual an insurance policy covering the first \$750,000 of the APA professional liability insurance policy (directors and officers), a 1-year claimsmade policy with a 1-year extended reporting period and retroactive to May 1, 1986 (June '86).
- 3. Approved a 25% premium increase for the major medical plan (to be effective Feb. 1, 1987), since the plan continued to c perate at a loss, i.e., paid out 94% of what it brought in (73% is the permissible level) (Sept. '86).
- 4. Approved a 3-year term of office for members of the Psychiatrists' Mutual board of directors and a policy to recons der each member at the end of the term (June '86).
- 5. Appointed Dr. Alan Levenson as a settlor of the APA insurance
- Trust and Group Insurance Trust (Dec. '86).

 6. Pursued the Assembly's request to study the concept and feasibility of publishing advertisements to inform the public of discriminatory health insurance by asking that the Joint Commission on Public Affairs, the joint Reference Committee, and the Medical Director follow up this request, with the understanding hat costs should be handled within the current budgetary allocation and that recommendations be reported to the Assembly in time for consideration in May 1987 (Dec. '86)
- 7. Addressed the Assembly's request that APA formulate an action plan regarding discrimination in the Federal Imployees Health Benefits Program and, specifically, work toward parity in outpatient copayment; requested the Joint Commission on Government Relations to continue its efforts but cautioned the Assembly that such efforts would involve significant costs and need to be viewed with reasonable expectations (Dec. '86).
- 8. Ratified the Executive Action providing \$2,500 from the Board's contingency fund to share the cost of an advertisement in the Washington Post supporting mandated mental health be refit legislation in Washington, D.C. (Dec. '86).

International Affairs

- 1. Authorized the Task Force on Problems of Americans Overseas and the Council on International Affairs to seek external funding for the task force's ongoing projects (March '87
- 2. Formally invited the U.S. State Department and the American Bar Association to cosponsor with APA the Conference on Living Abroad (Oct. 9-10, 1986, Washington, D.C.) (June '86).
- 3. Approved in principle the International Education Project; approved allocation of \$3,000 from the joint Reference Committee's 1986 contingency fund for the current year (June '86).
- 4. Ratified Executive Actions for APA cosponsorship of human rights missions to Chile in August 1986 and during the veekend of Jan. 25, 1987 (Sept. '86 and March '87).
- 5. Ratified the Executive Action nominating Dr. Anatoly Koryagin for the Nobel Peace Prize (March '87).
- 6. Communicated a statement of concern about the escalating chaotic situation in South Africa to the APA membership, he Society of Psychiatrists of South Africa, and the World Psychiatric Association (WPA) (June '86).
- 7. Ratified the Executive Action adding support of the United Nations Declaration and Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment to the joint

resolution against torture, in conjunction with the American Psychological Association (May '86).

- 8. Approved sending APA's response to the Daes Report to the United Nations Institute for Human Rights and to psychiatric organizations in other countries to encourage them to contact the United Nations; approved allocation of \$2,500 from the 1986 joint Reference Committee contingency fund for this (Dec. '86).
- 9. Supported ratification of the U.N. Convention on Elimination of All Forms of Discrimination Against Women (Dec. '86).
- 10. Endorsed encouraging members to foster collaboration with colleagues in the Soviet Union providing it is not part of an official APA function and reiterated the current policy that any official contact between APA and the All-Union Society of Psychiatrists and Neuropathologists can be established only if it includes opportunity for discussion of alleged abuses of psychiatry in the Soviet Union (Dec. '86).

JCAH

1. Authorized the Medical Director to transmit to the Technical Advisory Committee for Hospital Accreditation Program of the Joint Commission on Accreditation of Hospitals (JCAH) a request for prompt action addressing APA's belief that the JCAH should require nursing services in general hospitals to be organized under a single director (June '86).

Judicial Actions

- 1. Approved APA participation with the AMA in filing an amicus brief in the appeal of the Seventh Circuit's decision in Bowen v. Wisconsin. This case addresses Medicaid waivers for nursing home transfers and involves psychosocial elements of medical care (March '87).
- 2. Authorized APA to provide to the California Psychiatric Association one-half of the cost, up to \$12,500, of obtaining standing in the appeal case CAPP v. Rank, which challenges a Los Angeles Superior Court decision ordering admitting privileges to clinical psychologists for hospital management of psychiatric patients (June '86).
- 3. Approved payment of up to \$3,000, on a matching basis, to the California Psychiatric Association for its participation in Spencer v. St. Mary's Hospital, which involves a claim of a right to refuse treatment under California law (Sept. '86).
- 4. Approved payment of up to \$3,000, on a matching basis, for the amicus brief of the Northern California Psychiatric Society in Allred v. Superior Court, which involves a custody dispute where the issue is availability of the mother's psychiatric records to the father's attorney; the district branch argues for confidentiality (Sept. '86).
- 5. Approved a contribution of up to \$3,000, on a matching basis, to the Delaware Psychiatric Association for its amicus brief in the appeal of Lair v. Naidu, a malpractice case against a state hospital psychiatrist who was charged with violating professional standards after a patient who had been discharged five and one-half months earlier drove into an oncoming car and killed the driver (March '87).
- 6. Approved financial assistance to the Illinois Psychiatric Society of up to \$3,000, on a matching basis, for its participation as an amicus in the appeal of *Illinois Psychological Association v. Falk*, which involves a challenge by psychologists to the hospital regulations in Illinois (Sept. '86).

7. Allocated from the Board's contingency fund an additional \$3,000, on a matching basis, for the preparation of the amicus brief in *Illinois Psychological Association v. Falk* (Dec. '86).

- 8. Approved a contribution of up to \$3,000, on a matching basis, to the Michigan Psychiatric Society for its amicus brief in Davis v. Lihm, involving a Michigan Supreme Court claim regarding liability for a dangerous patient. The case is one of the most extreme extensions of the Tarasoff decision, and the consequences, if the decision stands, will be unfortunate (Sept. '86).
- 9. Authorized payment of \$400 to the Eastern Missouri Psychiatric Society for reimbursement of one-half of the cost of its brief in *Jamison v. St. Louis*, which involves a former mental patient who was fired and then denied the right to picket because of his previous mental illness. The federal district court judgment claimed that

picketing by a mentally ill person raised the danger of violence and should be prohibited. The former patient had no history of violence. The district branch prepared a brief arguing against the equation of mental illness and dangerousness (March '87).

10. Authorized APA to file a letter in conjunction with the New York Area Council asking for a rehearing in *Rivers v. Katz*, in which the New York Court of Appeals ruled that the due process clause of the state constitution entitled patients to refuse medications that control severe psychiatric symptoms (June '86).

11. Approved payment of up to \$3,000, on a matching basis, to Area II for its amicus brief filed *In re Grand Jury Subpoena*, which argued for confidentiality of patient records in a Medicaid fraud

investigation (Sept. '86).

12. Ratified the Executive Action authorizing APA to sign onto an amicus brief filed in defense of the appeals court case International Primate Protection League, et al. v. the NIH and the Institute for Behavioral Research. The case was brought by animal rights groups seeking to gain custody of some research laboratory animals on the grounds that they are friends of the animals and that animals and their ombudsmen, like minor children and their guardians, have standing in court (May '86).

Liaison Activities

- 1. Continued formal APA liaison with the National Council on Aging and encouraged further liaison with other lay organizations focusing on aging (June '86).
- 2. Authorized APA's participation as a cooperating organization in the Annual Conference of the American Hospital Association Section for Mental Health and Psychiatric Services, scheduled for June 16–19, 1987, in Boston (March '87).
- 3. Approved the report of the Ad Hoc Committee on Liaison Activities and its recommendations that every liaison activity report to a council and/or component and be assigned an appropriate staff member and that a committee consisting of these staff members and chaired by the Medical Director or designee be appointed to coordinate all liaison activities (Sept. '86).
- 4. Authorized developing an audiovisual tape to address career issues in psychiatry and updating the educational exhibit at medical student meetings (June '86).
- 5. Encouraged the district branches, the Assembly (Committee on Public Psychiatry), and the academic community (through the American Association of Chairmen of Departments of Psychiatry) to foster collaboration with local chapters of the National Alliance for the Mentally Ill (June '86).

Marketing/Education

1. Renewed the contract with GLS Associates for a third year with the understanding that educational projects and informational materials will be made available to the district branches at reasonable costs; acknowledged the Assembly's request for regular reports on the division of resources between educating members about how to adjust to the present marketing conditions and educating members about how to change the current marketing conditions to increase the access of the psychiatrically ill to services (Dec. '86).

Medical Staff Bylaws

1. Approved for publication the report of the Task Force on Medical Staff Bylaws (June '86).

Medicare Payment Denials

1. Requested the Joint Commission on Government Relations to define a strategy to counter Medicare IL 372 payment denials; authorized the Medical Director to actively pursue this matter (June '86).

Member Benefits

1. Approved entering into an agreement with First Service Travel to offer a travel program to members (Dec. '86).

2. Approved entering into an agreement for rental car discounts with National Car Rental (Dec. '86).

Membership Actions

- 1. Authorized dropping from membership members whose dues are in arrears for 1985; authorized administrative reinstatement of those who return to good standing by Jan. 31, 1987 (Dec. '86).
- 2. Approved dues relief and transfer to Inactive status for members recommended by the Committee on Membership (June and Dec. '86).
- 3. Requested the Budget Committee to examine a number of recommendations for changing the dues structure during the first 10 years of APA membership, including the possibility of increasing dues in incremental steps beginning in residency (June and Dec. '86).
- 4. Requested the Budget Committee to consider a proposal to reduce dues for Canadian members (Dec. '86).
- 5. Requested the Council on International Affairs and the Budget Committee to consider possible further reductions in dues for Members-at-Large in Mexico and other areas outside the district branch structure (Dec. '86).
 - 6. Expelled a member for an ethics violation (Dec. '86).
- 7. Approved nominee Janet B.W. Williams, D.S.W., for honorary Fellowship in APA (Dec. '86).
- 8. Approved Corresponding Members and General Members-at-Large recommended by the membership committee (Dec. '86).
- 9. Authorized dropping APA members who were dropped or had resigned from their district branches; authorized reinstatement if they returned to good standing in the district branches (June, Sept., and Dec. '86 and March '87).

Minority Health

1. Authorized the President to send a letter to the U.S. Department of Health and Human Services regarding its "Report on Black and Other Minority Health" (Dec. '86).

Physicians Awareness Campaign

- 1. Approved continued development of the Physicians Awareness Campaign by the Joint Commission on Public Affairs and accepted financial support from Boots Pharmaceuticals for up to 100 local workshops on depression with the provision that APA will review and approve all promotional materials (Sept. '86).
- 2. Encouraged the Joint Commission on Public Affairs to work with the APA Section Council on the suicide prevention project and to incorporate this information regarding physicians' self-health care into the workshops on depression developed by the Joint Commission on Public Affairs and sponsored by Boots Pharmaceuticals (March '87).

Prospective Payment

1. Instructed all relevant APA components to study and work toward development of prospective payment options, including capitation, for reimbursing the entire spectrum of psychiatric care, acute to chronic, short-term to long-term (as stated in Dr. Carol Nadelson's July 1, 1985, letter to Margaret Heckler, then Secretary of the U.S. Department of Health and Human Services (June '86).

Psychiatrist Payment

1. Authorized \$15,000 from the Board's contingency fund for the 1986 activities of the Task Force on Psychiatrist Payment and referred to the Budget Committee a request for an additional \$20,000 for the task force in 1987 (Sept. '86).

Psychiatry and Managed Care Conference

1. Endorsed development and implementation of the conference "Psychiatry and Managed Care—HMOs, IPAs, and Psychiatric Practice Organizations" and authorized the Council on Psychiatric

Services to seek external funding for conference-related expenses (March '87).

Publications

1. Authorized APA to contract with Healthways Communications, Inc., to produce a monograph series titled "Portraits in Psychiatry" and to pay APA \$3,500 per monograph; final approval of all aspects of the series rests with the Committee on History and Library (Dec. '86).

Quality Assurance

1. Assured the Assembly that the Board gives high priority to requests from the Council on Economic Affairs and components regarding quality assurance activities (June '86).

2. Requested further follow-up with OCHAMPUS in strengthening confidentiality (removal of identifiers, notification of providers and hospitals of their responsibility in providing confidentiality); requested *Psychiatric News* to publish information about these issues (June '86).

3. Authorized the Council on Economic Affairs and the Committee on Quality Assurance to develop plans for outpatient review of treatment for adults, children, and adolescents, and substance abusers; requested *Psychiatric News* to make space available to the committee (Dec. '86).

4. Requested that the Council on Economic Affairs and the Committee on Quality Assurance consider adopting a APA policy the statement that the frequency of review is determined by the treatment and clinical condition of the patient (Dec. 346).

Research

- 1. Authorized APA cosponsorship of the annual n ceting of the Association for Medical Education and Research a Substance Abuse, Dec. 9–12, 1986, at no cost to APA (June '86.
- 2. Approved "The Dexamethasone Suppression Test: An Overview of Its Current Status in Psychiatry" for publication as a task force report in the American Journal of Psychiatry (Dec. '86).
- 3. Endorsed formation and work of the National Research Council's Panel on Family Violence Knowledge and Policy (June '86).
- 4. Authorized expenditures (for dues, etc.) of \$600 Ser year for 5 years to support the National Association for Biomec cal Research (June '86).
- 5. Allocated \$12,500 from the Board contingency fund toward joint support of a research fellowship by APA and the National Alliance for Research on Schizophrenia and Depression (March '87).
- 6. Approved a new policy statement on questionnaires and surveys for APA research (Dec. '86).
- 7. Endorsed production and marketing of two vide stapes accompanying the task force report on tardive dyskinesia; authorized the Council on Research to seek approximately \$25,000 from outside sources to support the project (Dec. '86).

Residents

- 1. Recommended to the Residency Review Committee for Psychiatry and the Accreditation Council on Graduate N edical Education that there be uniform enforcement of the requirement of contracts between residents and training programs (June '86).
- 2. Supported participation of resident represent tives in two regional area council meetings and the fall Assembly meeting in 1987, with the understanding that future funding of resident participation would be included in the Assembly budget (Dec. '86).

State Government Affairs Program

1. Authorized the Medical Director to support legislative activities and critical issues in the states and to be accountable to the Assembly and the Board of Trustees; encumbered up to \$35,000 from the Board contingency fund for this purpose. The Division of Government Relations, working with a consultant, developed a state

legislative issues handbook and established a state affairs program within the division, beginning in 1987 (June and Dec. '86 and March '87).

Subspecialization

- 1. Referred for thorough examination and study to all relevant APA components and to the officers' meeting the Board's expressed concern about subspecialization and urged the American Board of Psychiatry & Neurology to also study this matter; voted to postpone further discussion and decisions until the December meeting of the Board (June '86).
- 2. Approved exploration of the pros and cons of adding qualification in addictions to psychiatry, internal medicine, family medicine, etc., through the American Board of Medical Specialties; stated explicitly the exploration was for study of the issue and did not indicate the Board had taken a position on subspecialization (Sept. '86).
- 3. Requested that the joint Reference Committee set aside considerable time to discuss the issues regarding subspecialization and report to the Assembly in November 1986 and to the Board in December 1986; voted to continue exploration of the issues involved and their impact on the field (Sept. '86).

 4. Requested the Ad Hoc Committee on Subspecialization to give
- 4. Requested the Ad Hoc Committee on Subspecialization to give a preliminary report to the joint Reference Committee and Board in June 1987, to distribute that report to the Assembly, and to make subsequent reports to the Assembly in November and to the Board in December 1987 (Dec. '86).

Substance Abuse

1. Approved "Position Statement on Psychoactive Substance Use and Dependence: Update on Marijuana and Cocaine" (American Journal of Psychiatry, May 1987) which superseded "Position Statement on Marijuana Laws" (Journal, May 1979) and is an adjunct to "Position Statement on Substance Abuse" (Journal, June 1981). The Assembly also approved the statement (Dec. '86).

Survey on U.S. Psychiatrists

1. Approved for APA publication The Nation's Psychiatrists: The 1983 Survey (June '86).

Terminology

1. Endorsed use of the terms "psychiatric medicine" and "psychiatric physicians" along with other currently used terms (March '87).

Terrorism Conference

1. Approved APA cosponsorship of a national conference on terrorism (June '86).

Treatments of Psychiatric Disorders

- 1. Approved a specific policy and procedures for the development, review, and final approval of the report of the Task Force on Treatments of Psychiatric Disorders, including the following policies (June and Dec. '86 and March '87):
- a. That the text being developed by the task force is not official APA policy and may be published as an APA task force report after approval by the Joint Assembly/Board Ad Hoc Committee to Review Treatments of Psychiatric Disorders and final approval by the Board of Trustees.
- b. That the introductory chapter and caveat will need the approval of the Board, Assembly, joint Reference Committee, and Council on Research.
- c. That during the comment phase of the development of the task force report, the Assembly/Board ad hoc committee, presidents of the district branches, Assembly minority representatives, and area representatives may review all parts of the report as requested.
- d. That one copy of the report of the Task Force on Treatments of Psychiatric Disorders will be provided to each of the area councils, three copies of the report will be made available at the Central Office for review by all interested parties, and additional requests for copies of chapters or the entire report will be honored at the expense of the entities requesting the copies.
- 2. Encumbered up to \$10,000 of the Board contingency fund to support the activities associated with review and approval of the report of the Task Force on Treatments of Psychiatric Disorders (March '87).

ELISSA BENEDEK, M.D.

Report of the Treasurer

This report is prepared from audited figures for the fiscal year that ended Dec. 31, 1986. The data presented also appear in the auditor's annual report. Table 1 is a statement of our financial condition, taken from the independent auditor's report, and table 2 reflects the functional revenues and expenses. These will provide the membership with the information needed to assess the operation and financial condition of the Association.

Fiscal Status, 1986

The financial position of APA is strong. I would like to discuss the Association's fiscal status in terms of the results of operations for 1986, cash flow, debt reduction, and net worth.

The operation of APA programs during 1986 resulted in income of \$17,988,538 and expenses of \$17,578,111, for a surplus from operations amounting to \$410,427. Of this amount, \$300,000 had been included in the 1986 budget as planned surplus for debt

reduction. The remaining \$110,427 represents surplus above that called for in the operating budget.

During 1986 an extraordinary event occurred that was beyond the operation of APA programs and produced \$963,772 more than the \$410,427 surplus just mentioned. Specifically, on Nov. 1, 1986, APA sold the assets associated with its former Office of Member and Staff Benefits to Professional Risk Management Services, Inc., a newly established firm in which APA owns a substantial interest. In connection with this sale, the Association assigned to Professional Risk Management Services various contractual agreements then in force and retained it to provide services to the Association. Such services consist principally of insurance administration and risk management. The gain on the sale was determined as follows:

 Selling price
 \$1,600,000

 Less related costs
 636,228

 Gain on sale
 \$ 963,772

TABLE 1. APA's Financial Condition in Fiscal Years 1985 and 1986

Item	1985	1986
ASSETS		
Current assets		
Cash and cash equivalents	\$ 994,412	\$ 1,536,988
Marketable securities	77,668	83,425
Accounts receivable, less		
allowance for doubtful		
accounts	755,004	788,009
Note receivable	227 222	250,000
Publications inventory	237,333	168,254
Grants and contracts,	1 221 245	2 240 075
approved and in process	1,321,245	2,249,075
Prepaid expenses and other	397,539	290,125
Total	3,783,201	5,365,876
Property, plant, and equipment	£ 107 470	5 107 470
Land	5,187,470	5,187,470
Building—leasehold interest	C 225 707	(25/ 717
and improvements	6,325,797	6,356,717
Furniture and equipment	1,335,745	1,570,936
Subtotal	12,849,012	13,115,123
Less accumulated depreciation	050 770	1 1/0 154
and amortization	858,770	1,160,154
Total	11,990,242	11,954,969
Other assets		
Notes receivable, less		975 000
current maturities		875,000
Deferred expenses, net of	520 721	2/7 020
accumulated amortization	538,631	367,020
Deferred land rent	621,389	652,926
Advances to affiliated	029 707	1 121 740
entities Nonmarketable securities	928,706	1,131,740
	2 000 727	125,000
Total	2,088,726	3,151,686
Total assets LIABILITIES AND FUND	17,862,169	20,472,531
BALANCES		
Current liabilities		
Current maturities of long-term debt	300,000	400,000
Accounts payable	1,432,212	1,639,773 814,583
Accrued expenses Deferred revenue	753,087 194,387	790,516
Deferred amounts	177,307	//0,316
Restricted—grants and		
contracts	235,890	267,985
Restricted—awards and	255,070	207,703
special projects	655,744	522,435
Other	240,724	887,378
Total	3,812,044	5,322,670
Long-term debt, less current	3,012,044	3,322,070
maturities	1,125,000	850,000
Capital lease obligation, less	1,12.3,000	830,000
current maturities	4,486,081	4,476,689
Fund balances	7,700,001	7,77,000
	4,365,924	5,740,123
Unappropriated Building		4,083,049
Total	4,073,120 8,439,044	9,823,172
	0,737,077	
Total liabilities and fund balances	17,862,169	20,472,531

The \$1,600,000 selling price was based on an independent outside appraisal. In view of the surplus from operations of \$410,427 and the income from this extraordinary event, the Association's independent auditors have certified that APA realized a surplus for 1986 amounting to \$1,374,199.

Services for members. APA's most important function is service to its members. Our membership has grown considerably during the past decade, i.e., from 23,301 members in 1977 to 33,293 as of Dec.

TABLE 2. APA's Functional Revenues and Costs for Fiscal Years 1985 and 1986

Item	1985	1986
Functional revenues		
Percent from each function		
Publications		
Advertising	19.69	17.15
Subscriptions and related		
fees	7.29	7.02
Book sales	13.11	10.22
Member services		
Dues from members	34.97	32.73
Meetings income	8.05	10.03
Other income related to		
member services	7.15	8.52
General income (invest-		
ments, overhead on		
grants, etc.)	4.84	9.24
Other income (sale of old		
building, assets, etc.)	4.90	5.09
Total revenues (dollars)	15,896,814	18.952,310
Functional costs		,
Percent for each function		
Governance (Board of		
Trustees, Assembly, councils)	13.36	14.18
Publication (APA journals		
and book sales)	29.87	28.33
Public affairs (public		
information and government		
relations)	11.44	10.80
Member services (membership		
services and educational		
programs)	30.46	33.97
General administrative	55115	
(administrative offices and		
other costs)	14.87	12.72
Total costs (dollars)	15,000,341	17,578,111

31, 1986. This represents an increase of 9,992 (about 43°5), for an average increase of almost 1,000 members per year during the past 10 years. This increase in membership, together with increasingly complex problems and opportunities facing our membership and a strong financial base, has led to the provision of more and better services for APA members. This growth in services has been primarily in government relations, public affairs, education, membership activities, economic affairs, and research.

Net worth. The Association's stated net worth has increased from approximately \$4 million in the mid-1970s to almost \$10 million today (\$9,823,172). This stated figure is extremely conservative, since it does not include the estimated increase in the value of the 1400 K Street property, which APA purchased in 1980. If this estimated increase in land value were to be included as part of APA's stated net worth, the figures would stand at about four and one-half times our net worth in the mid-1970s. The increase in the Association's net worth in recent years is particularly impressive, moving from \$7,486,501 in 1984 to \$8,439,044 in 1985 (imprevement of about \$1 million) to \$9,823,172 in 1986 (additional imprevement of well over \$1 million).

Debt reduction. In September 1985 APA secured a term loan of \$1,500,000 from the National Bank of Washington. The repayment schedule calls for repayment of the loan at the rate of \$300,000 per year. As was mentioned earlier, the surplus from operations for 1986 provided the \$300,000 needed for this debt reduction plus an additional \$100,000 in surplus funds, which added to not worth. It is anticipated that by December 1987 APA's short-term investments will be at the same level as the term loan (\$825,000). This, in turn, means that APA could completely pay off its term loan at that time by liquidating the short-term investments. Under the present payment schedule, the term loan is projected to be completely repaid by September 1990.

A challenge. The obvious conclusion from the foregoing discussion is that, as had been projected, APA has overcome the financial difficulties experienced during 1983 and 1984. However, a more subtle, yet extremely important point in this regard is that the Association achieved its current fiscal health through much hard work by member and staff leaders at all levels of the Association and that this hard work must be continued if this fiscal health is to be maintained. The income sources other than dues, which have provided much of the improvement in member services, have brought some problems with them. This type of income is difficult to project, necessitates the investment of funds in inventories, and drains cash through the establishment of accounts receivable. On the expense side, it has been necessary to carefully monitor the execution of component and department budgets to control expenditures and to provide feedback for planning budgets for future years. In addition, the achievement of fiscal strength tends to be a signal to some people that the difficult times are over and that we can all relax and discontinue careful budget monitoring; unfortunately, this is not the case. There is still a real need for all of APA's leaders to continue the teamwork and effort essential to maintaining fiscal stability for our Association.

Investments

The Investment Advisory Committee has guided the Association's investment program over the last 10 years. The stated investment policy of the Association is "to employ sound investment vehicles affording maximum return consonant with safety of capital, i.e., the type of investment a prudent individual would seek." With this in mind, safety of capital has been identified as the first objective of the investment program. The Association has carefully reviewed its investment alternatives in recent years and has shifted a majority of these investment resources from securities to the new headquarters building. The portfolio currently stands at approximately \$200,000.

The investment portfolio can now be expected to increase in size. First, the Association has agreed to hold and manage a fund, with an estimated value of approximately \$350,000, provided by the estate of Dorothy C. Kempf. The earnings on the fund are to be used as the basis for an APA award for specified contributions in the area of schizophrenia. This fund, which will increase the size of the portfolio from \$200,000 to \$550,000, will provide more diversification of the assets in the portfolio. Second, portfolio management will be further enhanced by the fact that the Investment Advisory Committee is now able to pursue long-range investment goals for growth without the past constraints imposed by the need to maintain liquidity in our reserves.

The performance of the portfolio was weak during 1986 relative to the Standard & Poor's 500. This stems from the fact that

undervalued stocks were intentionally purchased as long-term investments, with the knowledge that their short-term performance would not be good. It continues to appear that these assets will provide sound gains in the longer term.

Publications

The Association and its publishing affiliate, the American Psychiatric Press, Inc. (APPI), maintain approximately 150 book titles in inventory. The total 1986 income from the APA publication program amounted to \$3,365,301. Of this total, \$1,937,742 was provided by sales of APA publications and products, and \$1,427,559 came from sales of books published by APPI. Psychiatric News generated income of \$2,414,751, contrasted

Psychiatric News generated income of \$2,414,751, contrasted with expenses of \$1,204,869, for a surplus of \$1,209,882. This amount is \$304,200 more than the budgeted surplus of \$905,682.

The American Journal of Psychiatry produced revenues of \$2,493,305 and incurred expenses of \$1,727,951, for a surplus of \$765,354. This total is \$292,341 more than the budgeted surplus of \$473,013.

The journal Hospital & Community Psychiatry realized revenues amounting to \$908,858 and expenses of \$812,490. The resulting surplus was \$96,368.

Grants and Contracts

During the past decade, support from grants and contracts has increased more than twentyfold. Specifically, funding from these outside sources has grown from about \$300,000 in 1977 to an estimated \$7 million in 1987. This is an important means of funding since it supports needed programs without adding to member dues.

Conclusion

APA enjoys fiscal health, as can be seen from the 1986 operating surplus, increasing net worth, steady reduction of debt, and strengthening of the investment portfolio. At the same time, APA is providing more and better products and services for members and their patients. What is more, APA has the financial strength to assist its members in meeting the ever-increasing challenges and opportunities facing the field of psychiatry, individual psychiatrists, patients and their families, and APA itself as an organization.

I am delighted to have the opportunity to serve as your Treasurer and, thus, to continue to work with you as APA develops its resources even further to help ensure its ability to effectively deal with the issues that most certainly lie ahead.

ALAN I. LEVENSON, M.D.

Report of the Medical Director

During my 13 years' tenure as Medical Director of APA, the annual report has become a useful reflection of progress and problems. We have indeed been coping with extraordinary challenges; the themes of socioeconomic and political ferment have dominated my reports for the past 5 years. The coping process has been accompanied by a steady growth in our membership and an increase in the diversity and complexity of the functions assumed by the national leadership and the Central Office. Embedded within these coping efforts are numerous actions that have in themselves produced a focus on issues worthy of continued discussion and debate. Nonetheless, in following up on last year's report, I am

pleased with the mood, strength, and stability of the organization. While there are some continuing problems, both the tone and our actual activities are more positive and demonstrate strong, effective working relationships between staff and members.

Accountability and professional responsibility have been demonstrated in the Association's efforts to modify DSM-III and to produce a monograph on treatments of psychiatric disorders. In regard to the former, I would like to express my pleasure and congratulations to the Assembly and Board for working so well to resolve the debates on DSM-III-R. The Work Group to Revise DSM-III, under the leadership of Dr. Robert Pasnau, President, and

practice

Dr. Paul Fink, incoming President-Elect, met frequently with Dr. Robert Spitzer and his colleagues to deal appropriately with both internal and external concerns about the substantive content of DSM-III-R. The tone of collaboration and cooperation allowed the work to be completed in a satisfactory manner to provide a useful scientific and professional document. While no system is perfect, DSM-III-R will provide a convincing positive demonstration of psychiatry's clearer boundaries and the scientific status of our capacity to make diagnoses. It also will be a useful document in American psychiatry's effort to cope with the socioeconomic problems so prominent in today's struggle to maintain psychiatric benefits. No process ends completely; even as we enjoy the completion of this project, we must move ahead to plan for DSM-IV. In so doing, we will review the major issues affecting the field and their impact on the Association and on our patients.

Our efforts in support of scientific clarity and appropriate clarification have led to the development of the proposed monograph on treatments of psychiatric disorders. I have been positively impressed by a number of such publications by other medical associations and by their helpfulness to other physicians. Dr. Toksoz Byram Karasu, who has chaired the Task Force on Treatments of Psychiatric Disorders, has worked closely with the Assembly in attempting to deal with members' concerns. The issue of rational treatment planning is important to the profession, even though the proposed monograph will not be official APA policy. Although some debates continue, we have begun to confront the issues in a meaningful and

appropriately scientific manner.

One of the most striking changes in the past year has been in the liability program. The crisis in medical liability insurance has been marked by questions about the availability and costs of general liability coverage in this country, which have had a profound impact on many functions and activities. Two years ago we had major problems in obtaining needed liability insurance for our members. A separate corporation has been formed-Professional Risk Management Services, Inc., under the leadership of Ms. Beverly Patrickand serves an important, cost-effective function for our membership. This separate and newly formed corporation faces problems with accountability, the availability of insurance to all members, and coverage for certain aspects of practice such as general medical care or administration, but these are being addressed in a meaningful and logical way that will support the fullest insurance coverage for our members at competitive prices. In reviewing the formation and growth of Professional Risk Management Services, special acknowledgement must be given to Mr. Joel Klein, Dr. Paul Slawson, and APA Treasurer Dr. Alan Levenson for their extraordinary efforts in planning and implementation. Our active efforts in this area have been vital to our members' work.

Since my last report there has been a major leadership change in another related corporation. American Psychiatric Press, Inc. (APPI), has appointed Dr. Carol C. Nadelson, immediate past APA President, as its Editor-in-Chief. In her relatively brief tenure, Dr. Nadelson has been extremely active not only in broadening and strengthening the ongoing work of APPI but also in outreach to develop strong working relationships with potential authors in this country and abroad. The APPI editorial board has been expanded to include experts in a variety of clinical areas. APPI is beginning to consider publication of journals in diverse areas, which will represent new and exciting directions and provide an opportunity for leadership in such areas as neuropsychiatry, psychotherapy, medical education, and social psychiatry. In its 5 years of existence, APPI has become well recognized and highly regarded in the publishing industry. Not only does it have a competitive edge in psychiatric publications but its products provide an opportunity to negate some

of the stereotypes about psychiatry and psychiatric patients.

Last year many doubts were expressed about our peer review program. While concerns still exist, our efforts are progressing well, and our work is becoming better integrated into the Councils on Economic Affairs and Psychiatric Services and the Office of Psychiatric Services. Dr. Donald Hammersley and his staff have been most helpful in this process, and his thoughtful attention to the complexities of these efforts has helped us address and resolve many of the conflicts.

Under the energetic leadership of the staff director, Mr. Norman

Penner, we bid successfully for a new CHAMPUS contract, which was awarded in December 1986. The caseload for the pracorp project has grown geometrically, and the rapid expansion of workload has had an impact on other APA efforts, as we need to recruit master's level psychiatric nurses, obtain sufficient stace, and develop appropriate technological support.

While there are long-range organizational implication for the continued growth of this function, it is an important ac viry for organized psychiatry. Not only is it appropriate for us to strong advocates for high-quality psychiatric treatment but w endorse appropriate accountability in justifying the medica need for treatment. As an organization, we must address important mestions about confidentiality and utilization review as opposed to peer review, and engage in prospective as well as retrospective review. These are not simple issues with readily visible solutio is, but I remain convinced that these programs have been a strong force in maintaining insurance coverage for psychiatric care.

Economic concerns have become a major preoccupation and as I predicted 2 years ago, we continue to use even more of our csources and energy to meet these challenges for the rest of the 198 is. These issues, not unique to the specialty of psychiatry, have had a profound impact on our clinical practice and on research funding a deducational programs. Under the leadership of Drs. Joseph English, Donald Scherl, and Boris Astrachan, there has been intense estudy of psychiatry's options regarding diagnosis-related group. (DRGs) and their relation to psychiatric care.

Current concerns are with the proliferation of manage I health care systems—such as health maintenance organizations preferred provider organizations (PPOs), and individua associations (IPAs)—and their impact on appropriate and sufficient psychiatric treatment. A conference planned for this year vill edu cate APA leaders on the policy implications of efforts at medical coscutting, rationing, capitation, and reduced benefits for ou patients and will offer an opportunity to develop new approaches to care.

The APA Ethics Committee also is aware of these new is sucs and, in collaboration with the Hastings Center, held a conferen hin April 1987 to discuss "Psychiatric Ethics and the New Economics." Its sessions included "Ethical Traditions of Psychiatric Care and New Economic Realities: The Impact of PPOs, HMOs, er Private For-Profit Hospitals," "The Doctor-Patient Relationship and the New Institutions: The Psychiatrist as Double Agent," and Patients, the Public Good, and the Reconsideration of Psychiat Duties: Legal Liability and Ethical Responsibility." The conference cosponsors were APA, the Hastings Center, the National Association of Private Psychiatric Hospitals, the Sheppard and Enoch Pr it Hospital, the Institute of Living, and the Vista Hill Foundation

APA's marketing efforts continued apace during the past year under the able leadership of Dr. Howard Gurevitz, chai person of the Committee on Financing and Marketing, and Ms. Sus a Sargent of GLS, Inc. I have had the opportunity to hear several cocussions of these marketing efforts at the district branch level and have been impressed with the way our members listened carefully and came up with a number of pertinent ideas. I believe a marketing i rogram is central to our adaptive efforts and should be given high proceed. The active involvement of our Council on Economic Affairs the Joint Commission on Government Relations, and the Division of Government Relations should provide an even stronger integrated and positive effort.

The departure of Mr. Sam Muszynski, who headed cu Office of Economic Affairs, was a considerable loss. As is often the case, the change also provided an opportunity for functional raisew and reorganization. We recognize the close ties of our scient:fill efforts in and analysis of economic trends to marketing and to the education of those in a position to influence health policy. Thus, I have assigned Mr. Jay Cutler, Special Counsel and Direc or of the Division of Government Relations, direct supervisory ressonsibility of the Office of Economic Affairs. This involveme should strengthen our efforts in analysis and implementation.

Mr. Cutler's expanded role in this area reflects so to of the internal staff reorganization that we have begun this year and expect to continue. I have commented on the increased compleaty of our functions on a number of occasions, and there is an ongoi 3 need for reevaluating the structures and functions of the Central 11 fice. Not too many years ago we functioned in a number of ways like a cottage industry, or perhaps more like a "mom and pop" store. There were advantages and disadvantages to such a system. Staff knew each other better, and our managers could tolerate more informality. We have not yet become a super-modern "business office" but are beginning to use technology and information systems in a better fashion. Further efficiency measures and reorganization will be necessary, but I still enjoy writing individual letters, meeting as many APA members as I can, and visiting district branches. Nothing pleases me more than learning about members' problems and their suggestions when I visit the individual branches.

In the fall, I informed you of the assignment of Dr. Carolyn Robinowitz as Deputy Medical Director. Since that time we have recruited a Director of the Office of Education to succeed her; he will be on board by July. Dr. Robinowitz has been working with me to analyze the changes in staff during our growth over the past decade and to develop a more rational internal staff organization, using a system of clusters of departments, offices, and divisions and of reporting practices, which will make for greater efficiency and stronger internal communication. She has set as a goal for her first year strengthened interoffice working relationships and communication, leading to even more integrated approaches to function and administration, as well as health policy. While she has not been able to devote her full time to this effort, I have been extremely pleased with her initial efforts in this regard.

In previous annual reports I have given special emphasis to our activities in government affairs and public affairs. Indeed, I still rate these as the highest priority areas in producing genuine advances in APA's objectives. Working closely with the chairperson of the Joint Commission on Government Relations, Dr. Allan Beigel, and the other commissioners and network leaders, our Division of Government Relations has matured into a sophisticated, effective force. The staff leadership of Jay Cutler has been remarkable, and we are really fortunate to have him with our Association. Our State and Federal Legislative Institutes are models of excellence in learning how to work with legislators. This year's Federal Legislative Institute was of exceptionally high quality. The 145 members of the Legislative Affairs Network from 54 district branches gave excellent feedback. The keynote speakers included Senators Robert Dole and Spark Matsunaga, Representatives Thomas Downey and Beryl Anthony, and Dr. William Roper, Administrator of the Health Care Financing Administration.

Almost precisely the same message could be given about our public affairs functions. In his capacity as chairperson of the Joint Commission on Public Affairs, Dr. Harvey Ruben has provided energetic and wise leadership, working with Mr. John Blamphin, who heads our staff division. Collaborative projects with industry have assisted in our efforts to enhance psychiatry's image with other physicians and with the public. Our Public Affairs Institutes also have demonstrated excellent progress and have matured into very effective learning programs. We now have an experienced network of trained leaders who can cope more effectively with all varieties of media. While we have had limited resources for pursuing our objective-able representation of psychiatry in dealing with residual stigma, myths, and stereotypes—I look forward to APA's further progress in this area during the next year.

I am very gratified with the continued growth of the APA membership even in the face of economic pressures. Both the APA Committee on Membership and the Assembly Committee on Recruitment/Retention and Membership Affairs, under the leadership

of Dr. John McIntyre, have done a superb job.

Ms. Marta de Lalla and the staff of the Office of Member Services have been very effective in recruitment and retention of members. Dr. Jeanne Spurlock and the staff of the Office of Minority and National Affairs provided valuable assistance in addressing concerns of minority and underrepresented psychiatrists.

Also gratifying is the significant number of members who have voted in our elections for APA officers and Trustees. While in 1987 the number and percentage of voters decreased from those in 1986, which was the all-time high, the lack of controversy about the election process this year was noteworthy. We remain one of the few large national organizations that conduct elections open to the general membership.

Of our 33,500 members, over 5,000 are residents. These residents remain active in the Association after completion of their training. The results of the recent election endorsing the addition of a voting resident to the Board of Trustees demonstrate member awareness and support of residents' formal involvement in APA governance. The Assembly also has supported greater resident participation in its activities and in the district branches. Our yearly census of all psychiatry residents documents the increasing number of medical students choosing psychiatry. (In 1987 the largest number of medical students ever chose first-year positions in psychiatry through the National Resident Matching Program.) Residents also noted greater satisfaction with the field (considerably fewer leave psychiatry for other specialties) and greater interest in combined residencies (psychiatry and pediatrics, neurology, or internal medicine) and postresidency fellowships. The residents themselves are bright and articulate and bring a special vitality to the Association.

All of us should recognize the importance of our remarkable

success in increasing the number of APA Members-in-Training during the last 5 years. Not to be overlooked in this success story is the role of Dr. Carolyn Robinowitz and the Office of Education. Dr. Robinowitz's very special stature with chairpersons of academic departments of psychiatry and training directors has brought about their enthusiastic support for encouraging medical student and resident membership in APA. The secretaries and executive secretaries of our district branches have contributed significantly to this process and to our simultaneous recruitment of medical students.

In previous annual reports I have made a number of comments about the general roles of Dr. Donald Hammersley and Dr. Jeanne Spurlock. This year I especially want to thank them for maintaining our resident fellowship programs in a first-rate manner. The success of these programs and the vigorous leadership of our Committee of Residents, which works closely with Dr. Robinowitz and the Office of Education, has been a major factor in residents' increased participation in APA affairs.

Under the very able leadership of Drs. Allan Beigel, John J. McGrath, and others, the APA Section Council on Psychiatry and the delegation to the AMA House of Delegates have continued to function well. Dr. John J. McGrath, delegate, assumed increasing AMA leadership functions, including appointment to the AMA Council on Legislation and to a reference committee in December 1986. Many staff have worked with our section council, but I especially praise the work of Ms. Carol Davis, who coordinates our staff activities related to the AMA. An invaluable resource, Ms. Davis also takes leadership in APA's activities related to ethical matters, plays a major role in the organization of the annual meeting, and carries out a variegated series of complex functions that keep APA operations in gear.

Our Office of Research continues to grow in productivity and stature under the strong leadership of Dr. Harold Pincus. Working closely with Dr. Herbert Pardes, who chairs the Council on Research, Dr. Pincus has generated many new ideas, served as a convenor for a variety of research constituencies, and has developed valuable links with a number of professional and consumer groups. I am particularly pleased to note the continuing excellence of Psychiatric Research Report and the satisfaction and pleasure with which it has been received by its research constituency. Working with Mr. Tim Kennedy, who heads our Manpower Research Department, and the Committee on the Biographical Directory and Related Professional Activities Research, chaired by Dr. David Knesper, Dr. Pincus is using data collection for the 1988 directory to provide greater information about our members and the field. APA is becoming a highly visible force in psychiatric research issues.

Our project with the Social Security Administration to evaluate the Social Security disability criteria is nearing completion. After Dr. Sharfstein's resignation, Dr. Pincus undertook supervisory responsibility and is working closely with Ms. Cille Kennedy, director of research and training for the project, Dr. Howard Goldman, and other member participants. I also am pleased with the active involvement of district branches in the implementation of the study; the collaboration between the national steering committee and the local members has been excellent.

I also am mindful of many members and staff who have devoted their energy and wisdom to integration, coordination, and unity. In a very special way, Ms. Jeanne Robb and the Office to Coordinate the Board and Assembly epitomize the many functions carried on within APA. These forces also are reflected in our journals, in our other publications, and, perhaps most clearly, in the national scientific meetings of the Association.

Both Hospital & Community Psychiatry and the American Journal of Psychiatry have grown in quality and stature and reflect the scientific direction of the field. The excellent working relationship of the Managing Editors, Ms. Evelyn Myers and Ms. Teddye Clayton, and the Editors, Drs. John Nemiah and John Talbott, has been a model of staff and member collaboration. It is with regret that I report the upcoming retirement of Evelyn Myers. She is the first Managing Editor of the American Journal of Psychiatry, and in the more than 20 years she has filled this position ably, she has contributed greatly to the development of the Journal. She has been recognized for her excellence by colleagues throughout the editorial community, and her presence will be missed. We will have an opportunity to pay tribute to her more formally in June.

The Advisory Board for Psychiatric News, chaired by Dr. George Tarjan, has been reviewing both the policies and content of Psychiatric News. Consultants from other publications (e.g., Science, American Medical News) have provided valuable input. Under the leadership of Dr. Robert Campbell and Mr. Herbert Gant, Psychiatric News is demonstrating increased emphasis on meeting members' informational needs.

Chaired by Dr. Robert Hales, the Scientific Program Committee is one superb example of the integrative forces within the Association. The 1987 scientific program for the Chicago meeting is the best reflection of psychiatric advances that I can conceive. It is an excellent program, but it is more than that. It is a mirror of directions in the field and is a proactive and integrating force. Indeed, the full gestalt of the meeting illustrates President Pasnau's apt theme, "Psychiatry in Medicine: Medicine in Psychiatry."

The work of Ms. Cathy Earnest, who heads the Office to Coordinate the Annual Meeting, the support provided by Ms. Kathleen Bryan and the staff in the Office of Meetings Management, the continued wisdom and dedication of Dr. Carolyn Robinowitz, including leadership regarding the meeting's educational objectives, and the special know-how of Carol Davis all demonstrate our organizational capacities, creativity, and resilience. The modifications in structure, program formats, content, and scope reflect our commitment to members' continuing education and organizational function.

Also deserving of special mention this year is the sustained, remarkably high-level contribution of Joel Klein (and other members of the law firm Onek, Klein, & Farr). I already have alluded to Mr. Klein's work on professional liability insurance; he also deserves praise for his work with our Commission on Judicial Action. (Dr. Paul Appelbaum has been a most effective leader of this component.) Mr. Klein has been a valued friend, as well as counselor, through a number of difficult and thorny decisions.

Among my own special areas of interest, a number of international responsibilities are to be noted. I particularly have enjoyed being active in the World Psychiatric Association and chairing a work group charged to prepare a new structure for the organization.

Our Office of International Affairs has matured and become very widely respected under the leadership of Ms. Ellen Mercer and this remains a source of pride and satisfaction for me. I also us pleased that we have agreed to host a regional symposium of the World Psychiatric Association in Washington, D.C., in October \$88. Dr. Robert Hales has assumed leadership of that program, which promises to be most stimulating.

Our ability to communicate, as well as collect and retrieve information, has expanded immensely under the strong leadership of Dr. William More, who heads our Information System. Office. Although we are just beginning to utilize the available to inology. APA has been cited as a showpiece specialty society by the Digital Equipment Corporation.

In my judgment, none of these many functions could be carried out effectively without a sound fiscal structure, and during the past year we have seen many developments that indicate AI is fiscal stability. This is indeed a monumental effort. We hav become involved in a variety of activities that are more difficult appredict than our more circumscribed objectives of only 5 years age. Yes, we are involved in a building venture, a publication corporation, o larger insurance corporation, diverse contracts, and racity other activities in addition to our more traditional functions. am very grateful to our Treasurer (Dr. Alan Levenson), the two chargersons of our Budget Committee (Drs. Alan Levenson an Stever Sharfstein), the chairperson of our Resource Development Commit tee (Dr. Charles Wilkinson), and many other members played key roles in ensuring income for the Association lating our expenses. Dr. Jack White and Mr. Robert Mil nicz and the staff involved in budget implementation also have done at excellent job. Drs. Sharfstein and Robinowitz in their staff coles also have contributed to this integrative effort, which, in my .:dgment. shows APA at its working best.

Comments about "the best in APA" are a good link to my belief that we have been very fortunate in our choice of leasers. Our President, Dr. Robert Pasnau, has been an outstanding leasers, whose wisdom and good judgment have been so important to our and our future. The scope of his activities and breadth of have been a model for us all. Our Speaker, Dr. Roger Peel also has been exemplary. His sensitivity to and knowledge of also has been exemplary. His sensitivity to and knowledge of also has been exemplary. It has been a privilege to work members this year toward a stronger and more effective has anticipate an excellent alliance with our next President, I George Pollock, with Dr. Irwin Cohen, who will become Speak in May 1987, and with all the other APA members who serve the Association and the field so ably.

Extensive reports on the individual staff departments are available from the Central Office. They attest to the diversity, end hity, and complexity of staff efforts and demonstrate our commitment to strengthening the field and supporting our members and the patients they serve. It is a privilege and pleasure to be Medical I rector of such a strong and vital organization.

MELVIN SABSE N, M.D.

Report of the Speaker

Being a Lighthouse

It was midnight and Admiral Muchpower decided to visit the bridge of his aircraft carrier, which was moving westward at 15 knots. Upon arriving at the bridge, he saw a light lead. He ordered the signalman to flash this message: "Please of inge your course 5 degrees south."

The reply was, "Please change your course 5 degree north."

The light did not change course. Annoyed, the Admiral sent, "Change your course 5 degrees south, this is Admiral Muchpower."

Reply: "Change your course 5 degrees north, this is Petty Officer Smith.'

Very annoyed, the Admiral sent, "Change your course 5 degrees

south, this is a U.S. Navy aircraft carrier."

Reply: "Change your course 5 degrees north, this is a U.S. Coast Guard lighthouse."

Given the apparent overwhelming nature of the economic and political forces influencing the access to adequate care and treatment of the psychiatrically ill today, how does an organization of 33,000 remain the lighthouse that those with much power will recognize? Recent Assembly actions provide direction.

Being a lighthouse requires a moral foundation, a solid organization of membership resources, a beam consistent with the rest of medicine, and a focus on standards of psychiatric treatment. I want to address each of these issues and speak to the Assembly's role in these issues.

Moral Foundation

The Assembly's 1986 request that APA explore the feasibility of establishing an advocacy office highlights one of APA's moral obligations. Avoiding advocacy leads to losing responsibility for patients—and losing professional autonomy. Advocacy can be organized around the three meanings of "patient rights" (1): a right to independence, a right to equality of access to opportunities with those who are not psychiatrically ill, and a right to entitlements that are unique to the needs of the psychiatrically ill.

Independence means each patient has the right to attain the maximum degree of freedom from his or her psychiatric illness and the consequences of that illness.

Equality means that the psychiatrically ill have the same opportunities for access to treatment and services in our communities and that the various forms of discrimination against the psychiatrically ill be eliminated. Foremost among these efforts is abolition of discrimination in health insurance and managed care settings. Very disturbing is what has happened to the Blue Cross-Blue Shield health insurance plan for federal employees. That flagship program has had a 43% decrease since the 1970s in the total proportion of benefits going to psychiatric treatment (R.J. Luehrs, former Executive Director, Operations, Blue Cross and Blue Shield Association Federal Employees Plan). Very disturbing also are the discriminations in managed care settings. Several years ago, prognosticators were telling us that if we wanted to treat the psychiatrically ill, we had best join health maintenance organizations (HMOs). Now it seems HMOs may be the last places to join if we want to treat the psychiatrically ill (2, 3).

The Assembly led the way by asking in October 1982 that the goal of APA's government relations be nondiscrimination. In pursuing nondiscrimination, two other terms sometimes intrude and cause confusion. One term is "parity." Parity's focus is on "producers"—milk producers and so forth. Parity lacks the focus of the Assembly's goal of nondiscrimination for patients. The other problem term is "mandates." The Assembly endorses steps directed at decreasing discriminations. Thus, the perspective of the Assembly is that there are good mandates or bad mandates, depending on whether the mandate seems to decrease discrimination or preserve discrimina-

The third meaning of patient rights-"entitlements"-is basic. As the blind need access to Braille and as the deaf need access to hand-signing interpreters, so the chronically disabled psychiatrically ill need access to educational, occupational, and social supports to be part of our society. In advocating entitlements, especially the more expensive entitlements, we owe the public empirical evidence that a specific entitlement achieves its purpose. Too often we have only been able to offer rationales. Each entitlement needs to be approached with the same regard that we use in approaching treatment modalities (4). Thus, we need to state the indications, contraindications, cautions, and conditions of use of each entitlement. We need to express public psychiatric policy in medical terms. We need to move from dogma and debate to data in clarifying what an entitlement will achieve, for whom, and at what cost.

In conceptualizing entitlements, it is essential that we first clarify the importance of achieving equality of access. Adequate psychiatric treatment narrows the need for entitlements. In calling on APA in 1979 and 1985 to adopt the recommendations of The Chronic Mental Patient (5) and The Homeless Mentally Ill (6), the Assembly took a positive stance on the many entitlements suggested in those two APA publications. An example may help clarify this point, so I will select an entitlement, namely asylum (7-9), that has been of personal interest to me for more than a decade and is one of the entitlements advocated in The Homeless Mentally Ill.

An asylum for the chronically disabled or the chronically dangerous can be expensive. Theoretically, for a single patient who becomes permanently disabled or dangerous in his or her late teens in the District of Columbia, the lifetime cost of care and treatment could be \$1-\$5 million in today's dollars. Thus, at Saint Elizabeths, in developing the Asylum Community, we established narrow indications. Our criteria included the proviso that we not use this option until all substantial therapeutic approaches have been exhausted. When treatment is denied or disallowed, this can lead to an abuse of asylum. When treatment is denied or limited, there is premature use of nontherapeutic substitutions. Discrimination against the psychiatrically ill in insurance and managed care systems thus has the potential of leading to overuse of asylum and other entitlements. The Assembly has taken the lead in recent years in stating the need for entitlements, but the Assembly's emphasis on nondiscrimination reminds us that entitlement needs cannot be adequately delineated and protected while discriminations against the psychiatrically ill continue to force an inappropriate use of entitlement resources in lieu of adequate treatment.

The overriding issue is the need to abolish discriminations against the mentally ill. We must abolish these discriminations!

Organizational Issues

"Unity Amidst Diversity" was Dr. Nadelson's presidential theme for the 1986 annual meeting. To marshal the energies of this nation's estimated 39,000 psychiatrists and psychiatric residents requires that APA be receptive to diverse views and interests. It is a tribute to APA leaders, especially Dr. Sabshin, that more than 80% of these 39,000 are APA members.

Still, the fact that there are about 65 national psychiatric organizations outside APA (appendix 1) raises questions. Why are so many resources and so much of psychiatrists' energy going to organizations outside APA? Are there clinical, economic, educational, political, or social needs that APA cannot meet? I believe, with a few exceptions, that is doubtful.

These organizations represent subspecialization interests. Last year we categorized subspecialists by identifying particular aspects of psychiatrists or their work as follows (10):

- 1. A personal characteristic of the psychiatrist (age; sex; race; national origin; educational site or level; sexual preference).
- 2. The function (administration; clinical psychiatry; consultation and liaison; forensic psychiatry; occupational psychiatry; preven-
- tion/public health; research; academic psychiatry).

 3. The *employer* (community mental health center; correctional institution; federal government; HMO; military; public sector; general hospital; private practice).
- 4. The treatment site (office/outpatient/clinic/ambulatory care; day or partial hospitalization; inpatient or hospital psychiatry).
- 5. A body of knowledge or a treatment procedure (ECT: milieu therapy; psychoanalysis; psychopharmacology; psychotherapy; rehabilitation).
- 6. A personal characteristic of the patients served (age, such as old age; ethnic or racial characteristic, such as Hispanic origin; nonpsychiatric handicap, such as deafness; geographic area, such as Casper, Wyoming; specific psychiatric illness, such as affective disorder).

Advocacy support is easier if our organization parallels identified patient organizations (10). Gains in recent years in the public support of treatment of Alzheimer's disease, alcoholism, and mental retardations are examples.

Relation With Subspecialization Groups

In relating to subspecialized groups, four options occur to me: 1) ignore the subspecialty group; 2) develop liaison with the subspecialized group; 3) affiliate with the subspecialized group and allow it a place within our governance, such as medical specialty organizations' relations within the AMA; or 4) assimilate the subspecialty group and give it a role in the governance.

Being a lighthouse requires a unified beam. Ignoring or having liaison hardly assures unity. The affiliation model as represented by the AMA seems quite inferior to assimilation. As for the organizations participating in the governance of the AMA, many, sometimes even a majority, of an organization's members are not members of the AMA. This form of governance of the AMA seems regrettable, but it may be too late for the AMA to achieve assimilation. It is not too late for APA to have assimilation as one of its organizational goals.

A strategy of assimilation raises governance issues. Until the 1970s elected representation in APA was nationally or geographically defined. In the 1970s the Assembly added to its bylaws minority representation, which included an important requirement: "potential patients and other citizens with similar minority characteristics." In the 1980s we have added a specific educational level (residents). In organizing for advocacy, we face the question of whether elected geographic representation, minority representation, and resident representation are adequate to provide a unity for advocacy.

Recent trends suggest this is not adequate. Many would submit we have lost or are losing large patient groupings such as mental retardation, Alzheimer's disease, and substance abuse (including alcoholism).

Especially relevant today, of course, is the huge expansion of the care and treatment of substance abusers. Symbolizing the recent expansion was a 346% increase from 1978 to 1984 in private substance abuse units in this country (S. Frazier, personal communication, Sept. 5, 1986). As the war on substance abuse unfolds, it does not appear our present representation is adequate to advocate effectively the need for psychiatrists in the care and treatment of substance abusers, maybe the fastest growing field of the 1980s. At the end of this decade, will it be concluded that APA lost this area, one that is so large and of such concern to the public, partly because APA was never organized to advocate the use of psychiatrists in evaluation and treatment of these disorders?

Let's assume that my subspecialty is substance abusers. Do I join (and pay dues to) a group outside APA to represent my belief that psychiatric knowledge and skills should be part of every substance abuser's evaluation and treatment? Do I join an outside group to have a voice in these issues? Do I join an outside group to attend educational meetings and obtain relevant journals? Within APA, do I believe it is satisfactory to be a possible appointee to APA's Committee on Drug Abuse, which averages one vacancy a year? Or does APA create a component that I can join (and pay dues to) that has its own elected leaders, a substance abuse newsletter and journal, and a substance abuse educational track and business meeting within the APA annual meeting? Assimilation within APA of my subspecialty seems to be in my interest—and in the rest of psychiatry's interest.

"Medicine in Psychiatry: Psychiatry in Medicine," Dr. Pasnau's theme for this year, is rich with implications, one of which is our relationship with the rest of medicine. Some advocacy issues are not uniquely our issues but medicine's issues, e.g., patient-centered ethics, autonomy of practice, and tort reform. As we strive to increase access for the psychiatrically ill to adequate psychiatric treatment, our reason for advocacy, we face issues within medicine, including the following:

- 1. Counselors, ministers, nurses, psychologists, social workers, and others are asking to be treated as independent health providers. This is an issue not limited to psychiatrists. The decision to support or oppose the independent private practice of other disciplines is a medical issue. Any APA position on this topic has to be pursued within medicine as a whole.
- 2. Since nonpsychiatric physicians treat more mental illness than do psychiatrists, social workers, psychologists, and nurses *combined* (17), since mentally ill patients are often inadequately treated by

nonpsychiatric practitioners, and since prospective payr ent arrangements drive even more of the treatment to primary ossicians and away from specialists such as psychiatrists, our incress in increasing the access of people when they are mentally ill to dequate psychiatric treatment requires that our primary collaborated focus be with medical colleagues. The Joint Commission on Public Affairs' Physician Awareness Campaign touches this need. The Astembly's actions in May 1978 and last November to allow the terms "psychiatric physician" and "psychiatric medicine" and accourage APA leaders to be members of the AMA would seem to e useful additional aspects in assisting this nation's large number of catients to receive adequate psychiatric treatment.

In searching for collaboration in advocating the goal of a chieving adequate psychiatric treatment for the psychiatrically ill, e must start by establishing understandings with our medical collaboration. We must do this at all levels: nationally, locally, and individually.

Speaking to Standards

A profession without standards is not a "profession." A professions, by definition, have standards (12, p. 202). Professional standards may address our training and thus define a selves. Professional standards may address what is adequate the chiatric treatment and thus define what we do. Until we make a ditional progress in defining adequate treatment, our advocacy goal will be hampered.

In 1985 and in 1986 the controversy about publication of an APA treatment manual clouded discussions about the need to access the issue of standards in psychiatry. The November 1986 modern by the Assembly to have the "not official APA policy" disclaims and to allow the treatment book to be published as a task force repet t clears the table for a meaningful discussion of standards.

The Assembly has spoken frequently to standards of are and treatment. There have been a series of actions over the particle decade about the standards of the Joint Commission on Accreditation of Hospitals (JCAH) and standards for community mental health centers. The Assembly will likely continue to look for opportunities to define "adequate" psychiatric care and treatment. Our advocate is going to depend on specific definitions and id intifiable characteristics for "adequate."

The potency of JCAH is a reminder that our aircraf carrier-lighthouse analogy is not just a funny story. Speaking very cenerally, standards in today's society are "a force so pervasive as to hape the world and control systematically the content and process at human life" (12, pp. 227–228). It is in standard setting that a profession "can have the most unequivocal influence" (12, p. 204). Decorge Pollock's theme for the 1988 annual meeting will be "Opp retunities and Challenges for Psychiatrists and Psychiatry: 1988–200 and "There will be no bigger opportunity and challenge than the is the surrounding standards.

The Assembly's Role

Of the 1,205 national APA leaders listed in the 1986–1937 APA directory, 82% are selected by the President or by the Spinker. Of the 219 who have been elected to their positions by APA rembers. 91% are in the Assembly!

Concerns about the governance of APA activities have come from the Assembly. An increase in the number of elected raper than selected leaders would begin to answer the need for note APA activities to be overseen by elected leaders.

Such an increase in elected leaders would also be per of the strategy for assimilating subspecialized interests within . PA. The Assembly will need to decide whether it favors more elected APA leaders. If so, does it want those elected leaders on the Roor of the Assembly or in other components?

The decision in November 1986 to have voting representatives or residents in the Assembly leaves the Assembly with no cateria for Assembly membership. We could be on the brink of a run camotion for admission to the Assembly. The Assembly may want to pause before adding members until APA has come to terms with the place of elected leaders in APA and until the Assembly estallishes its membership criteria.

Conclusion

To be a lighthouse in the fog of prejudice and ignorance surrounding care for people when they are mentally ill requires an intense light, one intense enough to guide the enormous economic and political forces affecting access to adequate psychiatric treatment. To provide this guidance, we must deepen our moral roots, unify our voice, strengthen our ties with the rest of medicine, and set reasonable and comprehensible standards. In the past, the Assembly has led in addressing these issues. Knowing the members who constitute the Assembly, I am confident that the Assembly will continue to develop the foundation, strengthen the unity, and intensify the beam of the lighthouse our profession and our patients so desperately need.

ACKNOWLEDGMENTS

Ms. Grace-Marie Arnett, Dr. Roy Coleman, Dr. Seymour Gers, Dr. Julius Hoffman, and Dr. Dorothy Starr made suggestions that improved this report.

REFERENCES

- 1. Peele R, Palmer RR: Patient rights and patient chronicity. J Psychiatry and the Law, Spring 1980, pp 59-71
- 2. Backus YP: HMOs: not always the best medicine. Hosp Com-
- munity Psychiatry 1987; 38:229
 3. Flinn DE, McMahon TC, Collins MF: Health maintenance organizations and their implications for psychiatry. Hosp Community Psychiatry 1987; 38:255-263
- 4. Wyatt RJ, DeRenzo EG: Scienceless to homeless (editorial). Science 1986; 234:1309
- 5. Talbott JA (ed): The Chronic Mental Patient: Problems, Solutions, and Recommendations for a Public Policy. Washington, DC, American Psychiatric Association, 1978, pp 209-220
- 6. Lamb HR (ed): The Homeless Mentally Ill: A Task Force Report of the American Psychiatric Association. Washington,
- DC, APA, 1984, pp 5-9
 7. Peele R, Luisada PV, Lucas MJ, et al: Asylums revisited. Am J Psychiatry 1977; 134:1077-1081
- 8. Peele R: Will we always need asylums? Washington Post, Oct
- 31, 1983, p C-1
 9. Lamb HR, Peele R: The need for continuing asylum/sanctuary. Hosp Community Psychiatry 1984; 35:798-802
- 10. Peele R: Report of the Speaker-Elect. Am J Psychiatry 1986; 143:1348-1353
- 11. Regier DA, Goldberg ID, Taube CA: The de facto US mental health services system: a public health perspective. Arch Gen Psychiatry 1978; 35:685-693
- 12. Friedson E: Professional Powers: A Study of the Institutionalization of Formal Knowledge. Chicago, University of Chicago Press, 1986

APPENDIX 1. Psychiatric Organizations Outside APA

The following are 64 psychiatric organizations outside APA. This listing is not necessarily complete. Although an attempt was made to limit the list to organizations considered primarily for psychiatrists, organizations in which nonpsychiatric members are regarded as essential may have inadvertently been included.

Academy of Psychosomatic Medicine

Academy of Sleep Disorders Medicine

American Academy of Child and Adolescent Psychiatry (APA has liaison)

American Academy of Clinical Psychiatrists

American Academy of Psychiatrists in Alcoholism and the Addictions

American Academy of Psychiatry and the Law (some local subcomponents)

American Academy of Psychoanalysis (APA has liaison)

American Association for Geriatric Psychiatry (APA has liaison)

American Association for Psychiatric Training of Medical Students

American Association for Social Psychiatry

American Association of Chairmen of Departments of Psychiatry American Association of Community Mental Health Center Psychiatrists

American Association of Directors of Psychiatric Residency Training, Inc.

American Association of General Hospital Psychiatrists

American Association of Psychiatric Administrators (some local subcomponents)

American Association of Psychiatrists From India

American Board of Forensic Psychiatry, Inc.

American College of Neuropsychopharmacology

American College of Psychiatrists

American College of Psychoanalysts

American College of Psychosocial Research

American Neuropsychiatric Association

American Psychoanalytic Association (many local subcomponents)

American Psychopathological Association

American Psychosomatic Society

American Society for Adolescent Psychiatry (many local subcomponents)

American Society of Hispanic Psychiatrists

American Society of Psychoanalytic Physicians

Army Psychiatrists

Association for Academic Psychiatry

Association for the Advancement of Psychoanalysis

Association for Clinical Psychosocial Research

Association for Mental Health Affiliation With Israel

Association for Research in Nervous and Mental Disease, Inc.

Association of Child Psychoanalysts

Association of Directors of Medical Student Education in Psychiatry

Association of Gay and Lesbian Psychiatrists

Association of Korean American Psychiatrists

Association of Navy Psychiatrists

Association of Sleep Disorders

Association of Women Psychiatrists Black Psychiatrists in America

Chinese American Psychiatrists Association

Clinical Sleep Society

Eastern Psychiatric Research Association

Federation of American Psychiatry

Group for the Advancement of Psychiatry

Group of Concerned Psychiatrists

Japanese American Psychiatric Association

Lesbian Psychiatrists

National Association of Veterans Administration Chiefs of Psychi-

National Guild of Catholic Psychiatrists

Pakistan Psychiatric Society

Philippine Psychiatrists of America

Phobia Society of America

Psychiatric Research Society

Society for Psychiatric Treatment Research

Society of Biological Psychiatry

Society of Iranian Psychiatrists in North America

Society of Military Psychiatrists Society of Professors of Child Psychiatry

Society of United States Air Force Psychiatrists

Southern Psychiatric Association

Turkish-American Neuropsychiatric Association

ROGER PEELE, M.D.

Report of the Speaker-Elect

The joint Reference Committee, of which the Speaker-Elect of the Assembly is vice-chairperson and the President-Elect of the Association is chairperson, is a brilliant governance concept that was constitutionally established in 1983. It was designed to serve a multiplicity of purposes, not the least of which was to provide the Assembly with an opportunity equal to that of the Board of Trustees to examine and participate in the processing of significant issues. The joint Reference Committee's importance in APA has grown steadily, and there is every reason to believe this trend will continue. But with increasing influence have come calls to reexamine its role and place within the organization, particularly in relation to the Assembly. Should it serve mainly as a conduit or should it deliberate and almost create policy? Do its procedures guarantee fairness? Is it a muchnieded intermediate echelon or is it, in fact, getting too big for its britches?

In APA the Board of Trustees is both the executive and final arbiter of policy. It is thus a unicameral system. (The APA Constitution contains a provision that allows the Assembly to override a Board decision, but it has never been used.) The Assembly is only advisory. It requests the Board to consider and/or act, and while the Board has authority to reject or ignore Assembly requests and opinions, it has tended to do so less and less frequently. De facto, therefore, APA has become a quasi-bicameral structure. As the business of the Board of Trustees has increased—substantially so by Assembly contributions, which are not infrequently accompanied by considerable passion—the Board appears to be using the joint Reference Committee more and more as a conference committee between itself and the Assembly. Complex issues with complicated ramifications are often referred to it by the Board for study, consideration, and introspection, particularly when there is potential for internal conflict and interminable debate. This may or may not prove to be good for the Assembly. The findings and conclusions of the joint Reference Committee's investigative agencies—councils, committees, commissions, joint commissions, task forces, and now work groups-may run contrary to Assembly stances. Votes may take place in which the Assembly position is defeated. At times only adroit parliamentary maneuvering preserves or partially preserves Assembly interests, sometimes only gaining time. Obviously the joint Reference Committee has now become a major and often decisive battleground. There is serious question whether this was the intent of the creators of the joint reference committee concept. There are seven voting members-three from the Board, three from the Assembly, and the Medical Director. The chairpersons of councils, commissions, joint commissions, etc., are all ex officio and nonvoting, but they make up the bulk of the joint Reference Committee. These wise and experienced members contribute greatly and at times dominate the debate, and so they may materially affect the outcome even though they have no vote. During the past year our President-Elect and joint Reference Committee chairperson, George Pollock, M.D., has been eminently fair and has made special, conscientious efforts to see that Assembly interests were protected. For this the Assembly owes him a vote of sincere appreciation.

The question now is, Should the joint Reference Committee be a deliberative body or confine itself to tracking and switching? The Constitution is vague on this point and seems to emphasize the screening and referral functions of what is still labeled the "Reference Committee" (By-Laws, Chapter 6, paragraph 7). Nevertheless, there appears to be resounding support for a deliberative function.

Circumstances exist in which this is in APA's best interests. Components often submit matters that for a variety of reasons should be explored further and exposed to many points of view, an this may include some Assembly decisions. Need for intensive ser kiny may thus become a valid consideration. However, this need must never be allowed to rationalize disregard of the Assembly's view joint, and because of that possibility we must remain vigilant. At the same time, the belief held by some Assembly members that the assembly's decisions must be defended by its officers unto death must be modified.

As the principal representative of the Assembly or the joint Reference Committee, I frequently found myself in the difficult situation of not knowing the latitude the Assembly would colerate in compromising with opposing forces. At times it would a spear that defeat of the Assembly position was almost certain, so the task became to rescue as much as possible. Would my just generally consistent with what the Assembly permitted? Would it be considered treachery or statesmanship? Was further study indee even though it might demonstrate that the Assembly's position was untenable or unrealistic? As things stand, the Speaker-Electon must rely on his or her own intuition or caucusing with his or her fellow. Assembly representatives on the joint Reference Committee—the Recorder and Immediate Past Speaker—which is often impossible because of time constraints or the pressure of the monic.

I believe the accuracy of the Speaker-Elect's decisions in the joint Reference Committee can be improved significantly if 1 or she is assisted by an advisory body to which the Assembly h s assigned deliberative function. The Assembly Executive Committee is admin rably suited to this task, representing as it does all groups within the Assembly. Historically, the Assembly Executive Committee has never assumed much decision-making authority. Perhaps this is related to the Assembly's history. The Assembly originated as an expression of discontent with the status quo and in the be ref it could truly represent the membership where others could rot. It thus became compulsively devoted to democracy and resistant to authoritarianism. It may not yet wish to yield its hard-von prerogatives, even to a group of its own making. Neverthele, the idea should be seriously considered. In time trust would devel an, for I am convinced this would strengthen the confidence of or er components, including the Board of Trustees, in the Assemble's actions. Both the Board and the joint Reference Committee have implied a need for such an intervening step between them and the ... sembly at large, recently asking the Assembly Executive Committee to consider a couple of matters. I urge that this question be included in the agendas of the area councils and the Assembly Committee on Procedures, in addition to the Assembly Committee o Planning, where discussion has already begun.

The Assembly of 1986–1987 faced and dealt with many extraordinarily difficult and painful matters. Its success is attributable in no small degree to the incomparable leadership and intelligence of its Speaker, Roger Peele, M.D. The members of the Assembly of 1987–1988 must similarly confront formidable issues that will affect our patients, ourselves as practitioners and those who will follow us, and the role we believe APA must pursue to remain effective as the most prestigious voice for the mentally ill and emotionally esturbed in our country. I am confident we will do so with great success.

IRVIN M. CO .EN, M.D.

Report of the Committee on Constitution and By-Laws

The Committee on Constitution and By-Laws held one formal meeting this year to discuss a recommendation of the Elections Committee that had been referred to the Committee on Constitution and By-Laws by the Board. As chairperson, I wish to thank the members, Drs. Henry Payson, Girish Shah, Ralph O'Connell, Agnes Whitley, and Richard Thurrell, our Assembly liaison, Dr. Lee Park, and staff member Ms. Carol Lehmann for their cooperation in handling committee business expeditiously.

In November 1986 the committee prepared an introductory statement to accompany the amendments on the 1987 ballot.

In December 1986 the Board of Trustees referred to the committee the recommendation of the Elections Committee to consider changing the Constitutional deadline for the receipt of petitions from December 1 to November 15 and to review the entire election schedule, beginning with the October 1 deadline for receipt of the Nominating Committee's report. The Committee on Constitution and By-Laws met on Feb. 28, 1987, to discuss these issues and reported to the Assembly Executive Committee on March 15 and to the Board on March 21, at which time the Board approved the proposed amendments (appendix 1).

Briefly, the amendments propose changing the deadline for receipt of the report of the Nominating Committee from October 1 to September 15, a change that simply formalizes the customary practice. The committee wished to continue to allow 60 days from receipt of the Nominating Committee report to the deadline for receipt of petitions to allow potential petition candidates adequate time in which to collect the required signatures. Thus, the amendments also propose changing the deadline for receipt of petitions for nominations and referenda, from Dec. 1 to Nov. 15. These changes will allow greater flexibility in the election schedule.

The committee also recommended, and the Board approved, a change to Article IX of the Constitution that would increase the number of signatures required on a petition to amend the Constitution and By-Laws from 50 to 200. This change is in keeping with previous changes in signature requirements and is made because of the increase in membership.

APPENDIX 1. Proposed Amendments to the Constitution and By-Laws

The following amendments were approved by the Board of Trustees in March 1987 for reading to the membership at the 1987 annual meeting. They will be disseminated to the membership not later than Jan. 1, 1988, and will appear on the 1988 ballot. In the following text, brackets indicate deletions, and italics indicate additions.

THE CONSTITUTION

Article IX. Amendments

1. Proposals to amend the Constitution may originate either: (a) by a petition signed by [50] 200 or more voting members, or (b) by resolution of the Board.

THE BY-LAWS

Chapter Six. Councils, Committees, Boards and Other Organizational Entities

5. The Nominating Committee shall be appointed by the President within the first sixty days of his or her term of office and shall be comprised of a representative from each geographical area of the Assembly plus a chairperson. Each Area Council shall propose at least three candidates and the President shall appoint the members from among those candidates. The President may choose any voting member as chairperson of the Committee. The Committee shall nominate at least two candidates for each office and report its nominations to the Board by [October 1] September 15 or a September Board meeting, whichever is later, for immediate dissemination to the members.

Chapter Eight. Privileges and Responsibilities

5. The voting membership may initiate referenda or change an action of the Board by the following procedure: A petition signed by at least 500 voting members shall be submitted to the Secretary [no later than December 1] by November 15 to be voted on in the mail ballot in the following year. A statement from the petitioners setting forth the reasons for the action, following consultation with the President, Speaker, Medical Director, and legal counsel (including fiscal advice), and a statement from the Board will accompany the ballot. For a referendum to pass, at least 40 percent of the total number of members eligible to vote must vote and at least one-third of the total number of members eligible to vote must vote in favor. A referendum overturning an action of the Board shall be binding, except that the action may be reinstated by a two-thirds affirmative vote of the members of the Board eligible to vote and by a two-thirds affirmative vote of the members of the Assembly Executive Committee eligible to vote. A Board action to reinstate may be taken only at a regularly scheduled meeting occurring no sooner than one month after the meeting at which the referendum was certified. Certified referenda other than those overturning an action of the Board must be acted on by the Board with all deliberate speed.

Chapter Nine. Voting

1. Nominations for national office except that of Area Trustee shall be made by: (a) the Nominating Committee; or (b) a petition signed by 200 or more members eligible to vote. Nominations for Area Trustee shall be made by: (a) procedures established by the Assembly; or (b) a petition signed by 50 or more members of that Area who are eligible to vote. Nominating petitions must be filed with the Secretary [before December 1] by November 15 of the year immediately previous to the one in which the nominee would be elected.

LEIGH H. ROBERTS, M.D. Chairperson

Report of the Committee on Membership

The Committee on Membership met on Nov. 4–7, 1986, at the APA headquarters in Washington, D.C. Attending were Drs. John S. McIntyre (chairman), Rodrigo A. Munoz, Donna M. Norris, Chester M. Pierce, Michael J. Vergare, Aron Wolf; Marta DeLalla, Ph.D., director of the Office of Membership Services; and other Office of Membership Services staff. Guests and consultants included Dr. Carolyn B. Robinowitz, Dr. Ronald Shellow, Dr. Robert Hales, Dr. Harry Holloway, Ms. Cathy Earnest, and Mr. Timothy Kennedy. The committee met jointly with the Assembly Committee on Recruitment/Retention and Membership Affairs on Friday, Nov. 8, 1986.

Membership Activity in 1986

Membership data. The total membership as of Jan. 1, 1987, was 33,293, which represents a net gain of 1,456 members (4.6%) in 1986. The distribution by membership class and the changes in membership since Jan. 1, 1982, can be seen in table 1. As of Feb. 28, 1987, APA's 5,081 Members-in-Training represented 15.2% of the total membership and about 92% of the 5,488 psychiatric residents in the country, as reported in the 1985–1986 resident census. The Members-in-Training and the 620 Medical Student members together constitute 17.1% of the total membership. Overall membership growth varied substantially among the areas: Area I, 6.2%; Area II, 3.2%; Area III, 4.3%; Area IV, 6.4%; Area V, 5.3%; Area VI, 1.8%; Area VII, 6.8%; Members-at-Large, 0.9%; overall, 4.6%. Detailed membership transactions in 1986 are shown in table 2.

In early August 1986 rosters containing the names of the Members-in-Training required to advance to the General Member category were sent to the appropriate district branches. The staff of the Office of Membership Services maintained extensive daily correspondence with members and included pertinent information on the advancement procedures. In 1986, 73 Medical Student members were advanced to the Member-in-Training category, and 712 Members-in-Training were advanced to the General Member category. These transactions represent efforts to ensure timely implementation of actions in keeping with membership policies.

Recruitment, retention, and advancements play a significant role in the economic strength of the Association. Substantial increases in

the number of dues-paying members and a corresponding inc . ase in the amount of dues collected are described in detail in the 'Membership Dues' section of this report.

The 1987 ballot contained an amendment to the Constitut and By-Laws to include in the Board of Trustees a Member-in-1 and Trustee with voting privileges, elected at large, and a Men certification Trustee-Elect, also elected at large, who will serve for a 1-year term without vote.

Recruitment. The substantial growth in total members up between 1982 and 1987 (see table 1) reflects, among other a lors, a successful recruitment program. Letters asking for assist nee in recruitment of residents and medical students were sent in Jule 1986 to 227 directors of psychiatric residency training programs and in July to 128 chairpersons of departments of psychiatry, applications were included. Forty medical students who attended the annual meeting were contacted in July about joining APA. On May 29, 1986, letters were sent to 198 medical students believe to be graduating from medical school during 1986. They were encouraged to apply for advancement to Member-in-Training status of they planned to enroll in psychiatric residency programs.

An extensive recruitment effort in March and April 356 was aimed at psychiatrists who have never been members of APA Letters were sent to 1,197 physicians in 68 different district branch. As of Feb. 28, 1987, 68 of those who received invitations had become APA members.

Retention. In July 1986, 638 members were notified of their dues arrearages and impending membership termination in December. This number was reduced to 280 by the time of the Loard of Trustees meeting in December 1986; of these, 33 members 1 ad been reinstated by Jan. 30, 1987, for an actual loss of 247 members.

Retention efforts are conducted throughout the year in onjunction with the district branches and with the active involvement of the medical staff in the Central Office, members of the Committee on Membership, and staff of the Office of Membership Service. There is a concerted effort to ensure maximum retention. Extensive communication is maintained with members and the district branches as a means of conflict resolution, and emphasis is placed on the favorable aspects of the cost-benefit ratio of affiliation with PA and a district branch.

TABLE 1. Members in Each Class, 1982 to 1987

	Jan. 1,	1982	Jan. 1,	1983	Jan. 1,	1984	Jan. 1,	1985	Jan. 1,	1986	Jan. 1,	1987	Feb 3	, 1987
Membership Class	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Medical Student	0	0.0	0	0.0	0	0.0	208	0.7	420	1.3	605	1.8	62)	1.9
Member-in-Training	1,645	6.2	2,141	7.8	3,310	11.4	4,220	13.8	4,485	14.1	5,054	15.1	5,08	15.2
Associate Member	392	1.5	339	1.2	322	1.1	326	1.1	334	1.0	330	1.0	32	1.0
General Member	16,517	62.4	16,886	61.7	17,170	59.2	17,195	56.4	18,135	57.0	18,340	54.9	18,22 :	54.6
Fellow	3,990	15.1	3,964	14.5	3,736	12.9	3,628	11.9	3,497	11.0	3,758	11.3	3,55	10.6
Life Member	734	2.8	798	2.9	980	3.4	1,107	3.6	1,070	3.4	1,231	3.7	1,35 /	4.2
Life Fellow	1,968	7.5	2,010	7.4	2,308	8.0	2,518	8.3	2,566	8.1	2,609	7.8	2,78	8.3
Life Associate	19	•	20		29		28		30	0.1	34	0.1	Z+;	0.1
Inactive Member	573	2.2	559	2.1	502	1.7	580	1.9	601	1.9	587	1.8	62 %	1.9
Inactive Fellow	139	0.5	136	0.5	139	0.5	145	0.5	137	0.4	129	0.4		0.4
Corresponding														
Member	218	0.8	233	0.9	247	0.9	284	0.9	292	0.9	334	1.0	30.5	1.0
Corresponding														
Fellow	210	0.8	209	0.8	205	0.7	211	0.7	208	0.7	219	0.6	2 .	0.6
Distinguished														
Fellow	30	0.1	29	0.1	29	0.1	29	0.1	29	0.1	30	0.1		0.7
Honorary Fellow	35	0.1	31	0.1	32	0.1	35	0.1	33	0.1	33	0.1		0. i
Total	26,470	100.0	27,355	100.0	29,009	100.0	30,514	100.0	31,837	100.0	33,293	100.0	33,300	100.0

TABLE 2. 1986 Membership Transactions

Transaction	Number
Gains	2,213
New members	2,068
Medical Students	295
Members-in-Training	1,331
General Members	395
Associate Members	16
Corresponding Members	27
Corresponding Fellows	3 1
Honorary Fellow Reinstatements	145
General Members	120
Members-in-Training	8
Fellows	6
Associate Members	6
Inactive Members	5
Losses	757
Resignations and drops	545
Resignations from APA	163
Drops for nonpayment of APA dues	280
Expelled	1
Drops or resignations from district branches	101
and thus from APA	101
Verified deaths	212
Net gain Advancements and transfers	1,456 1,576
To Associate Member from Member-in-Training	1,576
To Member-in-Training from General Member	16
To Member-in-Training from Associate Member	4
To Member-in-Training from Medical Student	73
To General Member from Member-in-Training	712
To General Member from Inactive Member	5
To General Member from Associate Member	1
To General Member from Corresponding Member	4
To Corresponding Member from General Member	6
To Corresponding Fellow from Corresponding	
Member	2
To Corresponding Fellow from Fellow	1
To Fellow from General Member To Life Fellow from Life Member	200 4
To Life Fellow from Fellow	224
To Life Member from General Member	204
To 50-Year Life from Life Member/Fellow	22
To Life Associate from Associate Member	7
To temporary Inactive	17
To permanent Inactive	68
Recommendations by Committee on Membership	
for deferral or denial of change in member status	22
Deferral of transfer of General Member to Fellow	20
Deferral of transfer of Life Member to Life Fellow	1
Denial of 8-year General Membership requirement	
for Fellowship	1
Dues waiver actions	120
Approved	130
Waivers Reduction of dues	101 23
Refund of dues	23 1
Extension/deferral of payment	5
Deferred or denied	45
Dues waivers/Inactive status requests	38
Reduction of dues	6
reduction of dues	

Table 3 shows the gains and losses as percentages of the total membership. The losses have remained stable since 1978, and the net gains have shown a steady increase, from 1.92% in 1978 to 4.57% in 1986.

Germane to the issue of retention are the requests for dues relief and/or transfer to a dues-exempt category of membership. The committee reviewed 186 requests for special consideration during its meeting in November 1986. These requests are initially reviewed by the members' district branches, and the committee generally follows the district branches' recommendations. Information on the criteria for evaluating these requests was distributed to the district branches in January 1987 in an effort to increase uniformity and fairness in the review process.

When a member writes to the Central Office to request resignation but does not state any reason, a letter is sent describing the various alternatives to resignation. When the reason given is financial hardship or disability, the member is encouraged to request special consideration. Experience has shown that granting temporary dues relief to a member during a time of financial difficulty often ensures continuation of membership for many years; at the same time that the member's individual needs are met, the Association derives the important benefits of continued membership. Once membership is terminated, the probability of reinstatement is low; thus, retention assumes priority in the effort to achieve healthy and substantial membership growth.

In the case of philosophical differences with APA or concerns about the cost-benefit ratio that result in a wish to resign from the Association, the member is given extensive information addressing these concerns. The importance of remaining affiliated with APA is highlighted in these communications to encourage the member to reconsider his or her request to resign.

A letter from Melvin Sabshin, M.D., Medical Director, was sent to members with the last dues billing for the 1986 fiscal year. An informative insert was enclosed with the first 1987 billing, which was mailed in October 1986.

Membership dues notices continue to be mailed throughout the year to members with a previous balance due, to all new members as they are enrolled, and to members whose membership class is changed and for whom dues are prorated. Pertinent communications accompany the billings, often in the form of personalized letters that include the office to contact and a telephone number in case there are questions or problems.

Membership Dues

APA national dues. The Office of Membership Services reports that as of Feb. 28, 1987, 26,741 members had been billed for 1987 and prior national dues. The number of members who had made full or partial payments by that date was 21,164 (79.14%). The number of members billed had increased by 955 (3.7%) since February 1986.

Graduated dues increase. The committee reaffirmed its opinion that a gradual dues increase should be implemented for the 1988 dues billing. A graduated dues increase for the first 5 years after completion of residency would reduce the economic burden for those in the early stages of their careers. The marked increase in dues as one goes from Member-in-Training to General Member status is too burdensome. Also, the current policy is that dues are again increased after 10 years of membership, regardless of the member class at the time of enrollment; therefore, those who join as Members-in-Training become eligible for the highest dues sooner than those who join as General Members. With the increased representation of residents in the membership, a dues schedule that would be in the best interests of these younger members and would ensure membership retention is urgently needed. After completion of residency, repaying school loans and starting a practice are financial burdens, so it is especially important that dues are not a deterrent to continued membership. This issue was referred to the Budget

Committee and other appropriate components for further study. Reduced dues for Canadian members of APA and district branches. The committee heard from officers in two district branches in Canada about the increasing concerns related to APA dues, especially in view of the exchange rate. The committee felt that this issue warranted further consideration and referred it to the appropriate components (Budget Committee and joint Reference Committee).

Reduced dues for Members-at-Large in Mexico and other areas outside the district branch structure. Given the economic situation and exchange rates that affect Members-at-Large in these areas and the requests for dues relief from several of these members, the

TABLE 3. Members Gained and Lost, 1978 to 1986

Members as		New and Reinstated Members		Members Lost		Net Gain in Members		
Year	of January	N	%	N	%	N	%	
1978	24,210	980	4.04	514	2.12	466	1 92	
1979	24,676	1,256	5.09	587	2.38	669	2.71	
1980	25,345	1,033	4.08	564	2.23	469	1.85	
1981	25,814	1,422	5.51	764	2.96	658	2 55	
1982	26,470	1,527	5.77	642	2.43	885	3.34	
1983	27,355	2,242	8.20	588	2.15	1,654	6 05	
1984	29,009	2,169	7.48	664	2.29	1,505	5.19	
1985	30,514	2,037	6.68	714	2.34	1,323	4.34	
1986	31,837	2,213	6.95	757	2.38	1,456	4.57	

committee recommended that the possibility of even further reductions (over the current 18% discount) be referred to the Budget Committee and the Council on International Affairs for further consideration.

Fellowship

The Fellowship approval rate increased from 68.4% to 90.6% between 1976 and 1986. This increase is due to the outstanding quality of the nominees and the excellent documentation submitted by the district branches to the Committee on Membership.

Military Psychiatrists

At their joint meeting on Nov. 7, 1986, the Committee on Membership and the Assembly Committee on Recruitment/Retention and Membership Affairs considered the unique circumstances of military psychiatrists, which were described by Colonel Harry Holloway, consultant to the Committee on Psychiatric Services in the Military. From the discussion of this complex issue, the following salient areas emerged: 1) the need to ensure avenues of accessibility to the governance structure, particularly in regard to unique legislative and ethical issues and the organizational framework for military psychiatrists, 2) the relationship of membership dues to membership benefits and to fixed income—the committee debated exploring the feasibility of a district branch ceiling on local dues for military psychiatrists, and 3) the establishment of a separate district branch for psychiatrists in the military, which might be a possible avenue that would address some of these concerns. These issues are also being considered by the Assembly Planning Committee. It was noted that a thoughtful examination of the different areas of concern needs to continue to effectively resolve these complex issues.

Biographical Directory Questionnaire

Both membership committees welcomed the request from the Manpower Department in the APA Office of Research to review the proposed questionnaire for members who have joined the Association since the last biographical directory was published in 1983. Suggestions were made after a careful review of the proposed questionnaire; in addition, the committees expressed great interest in the section of the questionnaire that will address special membership topics. Suggestions for these questions included three major areas: 1) reasons for joining the Association, 2) perceived benefits of membership in order of priority, and 3) the effectiveness of the organization in reaching its stated goals, as reflected in activities in selected areas. The Assembly Committee on Recruitment/Retention and Membership Affairs will formulate specific questions and at its next meeting review them for inclusion in the questionnaire.

License Suspension and Membership Status

The Committee on Membership reviewed the recommendation of the APA Ethics Committee on membership status when a member's license is suspended. A previous referral to the Ethics Committee pointed out the need to clarify the effect of license suspension on membership status; license revocation results in automatic ermination of membership, but the effect of license suspension is ambiguous. The committee recommended and the Board subsequently approved the following wording for the Operations Manual of the Board of Trustees: "When a member's license is suspended membership status should not be automatically affected. Suspension of license shall trigger an investigation by the district branch and membership status should depend on the outcome of that i evestigation."

Census of Residents

The annual census of residents was conducted again for 1985–1986, and the statistical information was sent to directors of psychiatric residency training programs.

Membership/Fellowship Actions

The committee recommended and the Board subsequently approved the following.

Membership termination for dues arrearages. In compliance with chapter XXVI (Forfeiture of APA Membership, paragraph 4) of the Operations Manual, the Committee on Membership reviewed the list of members whose dues were in arrears and recommended that the members whose dues were in arrears for 1985 be dropped from APA membership and, further, that administrative reinstatement be authorized for the members who had returned to good standing by Jan. 31, 1987, and also were in good standing in their district branches.

Nomination for Honorary Fellowship. In accordance with the Operations Manual, the committee acts on nominations by voting members of the Association for Honorary Fellow and Dist nguished Fellow and forwards its recommendations to the Board of Trustees. A letter nominating Janet B.W. Williams, D.S.W., for Honorary Fellow was received. The committee reviewed eight letters of support, which included several letters from members of the Board. The committee recommended approval of Dr. Williams for Honorary Fellowship

Fellowship nominations. The committee received 225 nominations for Fellowship and reviewed 224; one request for a vaiver of the requirement of 8 years as a General Member was denied. Of the 224 nominations reviewed, 91% (N=203) were recommended for approval by the Board of Trustees. The committee recommended that 199 nominations for advancement from General Member to Fellow be approved, four nominations for advancement rom Life Member to Life Fellow be approved, 20 nominations for advancement from General Member to Fellow be deferred, and one nomination for advancement from Life Member to Life I ellow be deferred.

Corresponding Members/Fellows and Members/Fellows at-Large. The committee reviewed applications for membership and advancements and recommended that 27 applications for Corresponding Membership be accepted, three applications for Corresponding Fellowship be accepted, one application for advancement from General Member-at-Large to Fellow-at-Large be accepted, and one application for General Member-at-Large be accepted.

Dues relief/Inactive status. The committee reviewed requests for dues relief and/or transfer to Inactive status and recommended that 59 requests for dues waivers be approved, 14 requests for dues reductions be approved, 52 requests for transfer to Inactive Member/Fellow status be approved, four requests for extension/deferral of payment be approved, 24 requests for special dues consideration be denied, and 33 requests for special dues consideration be deferred pending district branch recommendation.

Appreciation to Staff

The Committee on Membership took special note of the outstanding work of the staff of the Office of Membership Services throughout the year under the direction of Marta DeLalla, Ph.D.

JOHN S. MCINTYRE, M.D. Chairperson

Report of the Committee of Tellers

The Committee of Tellers met on April 8, 1987, at APA head-quarters to certify the results of the 1987 election. The ballots had been mailed on Feb. 20, 1987, to the 30,978 eligible voting members; 108 undeliverable ballots were deducted from that number, so the adjusted number of eligible voting members was 30,870. The final tally included the 13,100 ballots that were returned (42.4% of the eligible voting members).

(42.4% of the eligible voting members).

The Committee of Tellers acted on questionable ballots, which had been held for its decisions. It also verified that all candidates for the 1987 election had verified the accuracy of their biographical statements and had submitted the required statements of compliance with election guidelines.

The Committee of Tellers certified that the following individuals were elected to office and so reported to the Board of Trustees: President-Elect: Paul J. Fink, M.D. (57.2% of the votes cast); Vice-President: Allan Beigel, M.D. (56.3% of the votes cast); Secretary: Elissa P. Benedek, M.D. (77.1% of the votes cast); Trustee-at-Large: Linda Logsdon, M.D. (50.5% of the votes cast);

Area II Trustee: Robert J. Campbell III, M.D. (63.2% of the votes cast); and Area V Trustee: Pete C. Palasota, M.D. (56.8% of the votes cast).

To have a valid election on a change to the By-Laws, 331/3% of the eligible voting members must cast votes. An abstain vote is considered to be a vote cast and counts toward determining if 331/3% has been reached. Abstain votes do not count in determining whether the amendment passes or fails. Once 331/3% has been reached, a majority must approve an amendment to the By-Laws. Of the eligible voters, 41.2% cast votes on the amendments creating the positions of Member-in-Training Trustee and Member-in-Training Trustee-Elect on the Board of Trustees (By-Laws chapters 3.2, 3.4, and 8.3, section 1.4b), and they passed with 88.5% of the votes.

The Committee of Tellers recommended that the Board of Trustees accept the results of the 1987 election, and the Board accepted.

EDWARD C. KIRBY, M.D. Chairperson

Haldiom 1.25 mg triazolam ©

Helps Meet <u>Both</u> Goals Of Insomnia Therapy

Improved Sleep



Daytinns Alertnass

- Rapidly Absorbed
- Promptly Excreted

Upjohn

Kalamazoo, Michigan 49001 USA

© 1987 The Upjohn Company

Please see adjacent page for brief summary of prescribing information.

Halcion® Tablets

(triazolam) 🕟

INDICATIONS AND USAGE: HALCION Tablets are indicated in the short-term management of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings, and/or early morning awakenings

It is recommended that HALCION not be prescribed in quantities exceeding a one-month supply.

CONTRAINDICATIONS: Patients with known hypersensitivity to this drug or other

HALCION is contraindicated in pregnant women due to potential fetal damage. Patients likely to become pregnant while receiving HALCION should be warned of the potential risk to the fetus.

WARNINGS: Overdosage may occur at four times the maximum recommended therapeutic dose. Patients should be cautioned not to exceed prescribed dosage.

Because of its depressant CNS effects, patients should be cautioned against engaging in hazardous occupations requiring complete mental alertness and also about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Anterograde amnesia and paradoxical reactions have been reported with HALCION and some other benzodiazepines.

PRECAUTIONS: General: In elderly and/or debilitated patients, treatment should be initiated at 0.125 mg to decrease the possibility of development of oversedation, dizziness, or impaired coordination. Caution should be exercised in patients with signs or symptoms of depression which could be intensified by hypnotic drugs. Suicidal tendencies and intentional pression which could be intensitied by hypnotic drugs. Suicidal tendencies and intentional overdosage is more common in these patients. The usual precautions should be observed in patients with impaired renal or hepatic function and chronic pulmonary insufficiency. *Information for Patients*: Alert patients about: (a) consumption of alcohol and drugs, (b) possible tetal abnormalities, (c) operating machinery or driving, (d) not increasing prescribed dosage, (e) possible worsening of sleep after discontinuing HALCION. *Laboratory Tests*: Not ordinarily required in otherwise healthy patients. *Drug Interactions*: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistaminics, ethanol, and other CNS depressants. Pharmacokinetic interactions of benzodiazepines with other drugs have been reported e.g. cadministration with either cimetiding or enthroprogrip reduced clear. been reported, e.g., coadministration with either cimetidine or erythromycin reduced clear-ance, prolonged elimination half-life, and approximately doubled plasma levels of triazolam, hence increased clinical observation and consideration of dosage reduction may be appropriate. Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of carcinogenic potential was observed in mice during a 24-month study with HALCION in doses up to 4000 times the human dose. Pregnancy: Benzodiazepines may cause fetal damage if administered during pregnancy. The child born of a mother who is on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity during the postnatal period. Nursing Mothers: Administration to nursing mothers is not recommended. Pediatric Use: Safety and efficacy in children below the age of 18 have not been established.

ADVERSE REACTIONS: During placebo-controlled clinical studies in which 1003 patients received HALCION Tablets, the most troublesome side effects were extensions of the pharmacologic activity of HALCION, e.g., drowsiness, dizziness, or lightheadedness.

	HALCION	Placebo	
Number of Patients	1003	997	
% of Patients Reporting:			
Central Nervous System			
Drowsiness	14.0	6.4	
Headache	9.7	8.4	
Dizziness	7.8	3.1	
Nervousness	5.2	4.5	
Lightheadedness	4.9	0.9	
Coordination Disorder/Ataxia	4.6	8.0	
Gastrointestinal			
Nausea/Vomiting	4.6	3.7	

In addition, the following adverse events have been reported less frequently (i.e., 0.9-0.5%): euphoria, tachycardia, tiredness, confusional states/memory impairment, cramps/pain, depression, visual disturbances.

Rare (i.e., less than 0.5%) adverse reactions included constipation, taste alterations, diarrhea, dry mouth, dermatitis/allergy, dreaming/nightmares, insomnia, paresthesia, than the content of the procession of the content of t

tinnitus, dysesthesia, weakness, congestion, death from hepatic failure in a patient also

receiving diuretic drugs.

The following adverse events have been reported in association with the use of benzodiazepines: dystonia, irritability, anorexia, fatigue, sedation, slurred speech, jaundice, pruritus, dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention. As with all benzodiazepines, paradoxical reactions such as stimulation, agitation, in-

creased muscle spasticity, sleep disturbances, hallucinations and other adverse behavioral effects may occur rarely and in a random fashion. Should these occur, use of the drug should be discontinued

No laboratory changes were considered to be of physiological significance.

When treatment is protracted, periodic blood counts, urinalysis and blood chemistry analyses are advisable

Minor changes in EEG patterns, usually low-voltage fast activity have been observed in patients during HALCION therapy and are of no known significance.

DRUG ABUSE AND DEPENDENCE: Controlled Substance: HALCION Tablets are a Controlled Substance in Schedule IV. Abuse and Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Patients with a history of seizures are at particular risk. Addiction-prone patients should be closely monitored. Repeat prescriptions should be limited to those under medical supervision.

OVERDOSAGE: Because of the potency of triazolam, overdosage may occur at 2 mg, four times the maximum recommended therapeutic dose (0.5 mg). Manifestations of over-dosage include somnolence, confusion, impaired coordination, slurred speech, and ultimately, coma. Respiration, pulse, and blood pressure should be monitored and supported by general measure when necessary, immediate gastric lavage should be performed. Multiple agents may have been ingested.

Store at controlled room temperature 15°-30°C (59°-86°F).

Caution: Federal law prohibits dispensing without prescription.



Upjohn THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA

J-7316 January 1987

PSYCHIATRIST

Chief of Psychiatry and staff psychiatrist positions available at this 786 bed neuropsychiatric medical center with a diversified Psychiatric Service of 462 beds. Applicants for Chief of Service must be board certified; staff positions available for board certified/board eligible physicians.

Located in South Central Michigan with excellent schools, summer and winter recreational facilities. Salary commensurate with education and experience.

Excellent federal benefits include health and life insurance, federal employees retirement system, social security, liberal vacation and sick leave policy, liability coverage. Chief of Staff, VA Medical Center, Battle Creek, MI 49016 or call (616) 966-5600, extension 3581.

AN EQUAL OPPORTUNITY EMPLOYER



Veterans Administration

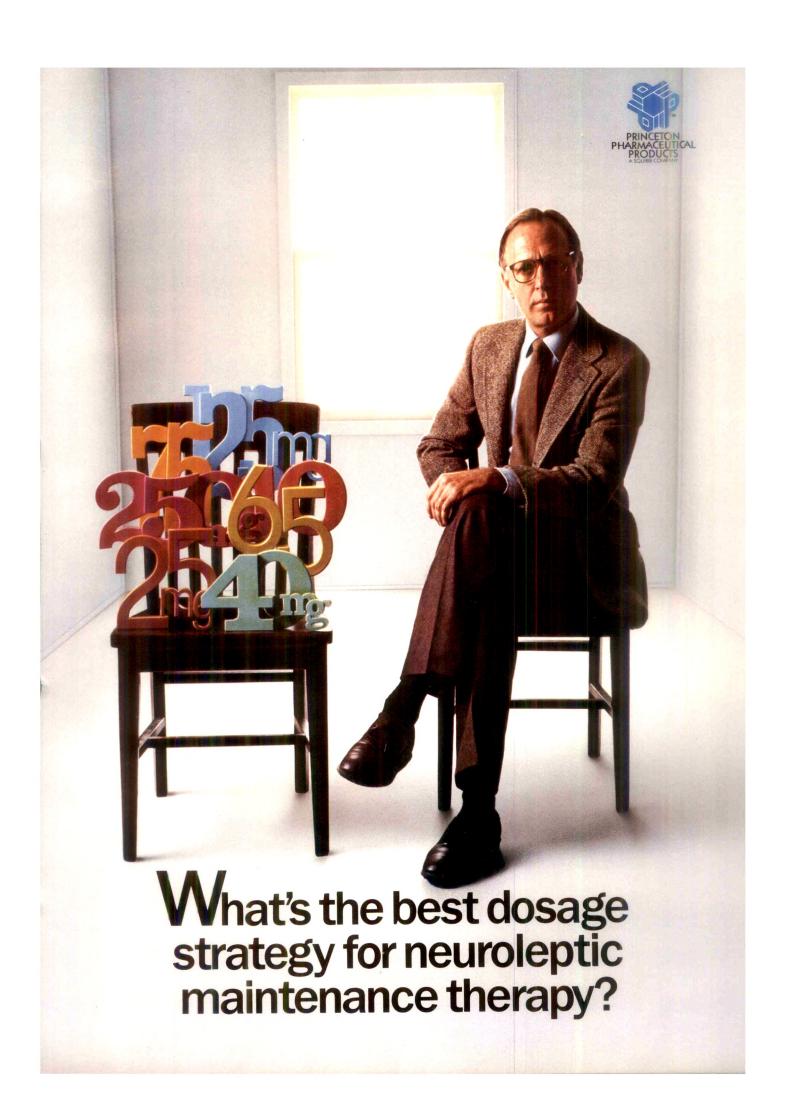
CHILD AND ADULT **PSYCHIATRIST**

Child Psychiatrist and Adult Psychiatrist, Madison, Wisconsin. Outstanding career opportunity to join a multi-disciplinary comprehensive Psychiatric Department at the Dean Medical Center, a multi-specialty group located in an outstanding community. The position involves assessment, treatment, as well as supervision of clinical social worker staff.

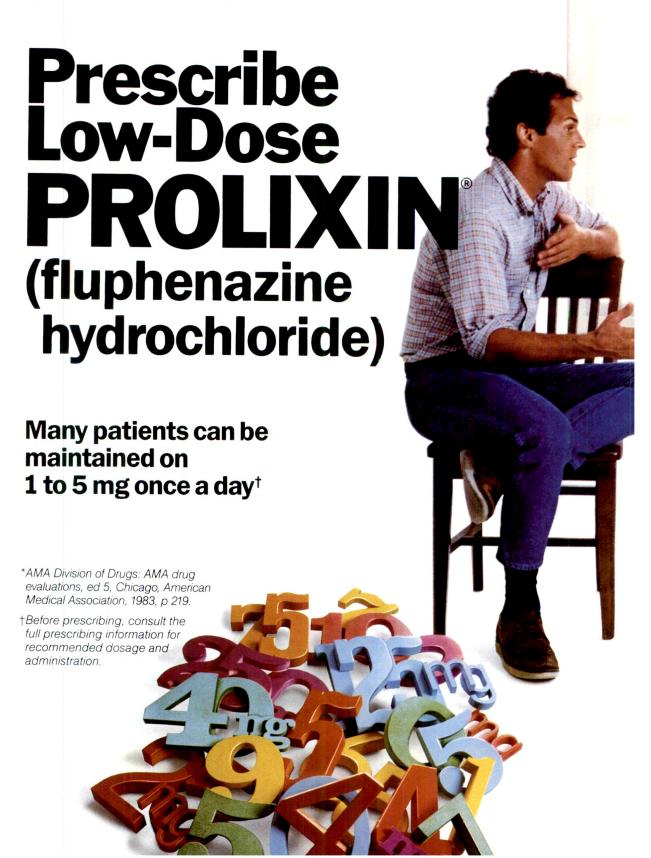
Generous salary and comprehensive benefit program which leads to partnership in two years.

Please send inquiries and resumes to: Peter J. Clagnaz, M.D., Chairman, Department of Psychiatry, Dean Medical Center, 1313 Fish Hatchery Road, Madison, WI 53715.

Equal Opportunity/Affirmative Action Employer.



The maintenance dose should be the minimum amount that maintains therapeutic response and allows the patient to function best. 77*





Safe, effective treatment

Helps avoid side effects most commonly associated with low-potency neuroleptics*

- Less sedation¹
- ► Fewer anticholinergic effects²
- Less risk of cardiovascular effects²
- ▶ Rarely reported sexual dysfunction²

Acute care through maintenance therapy

The low-dose PROLIXIN® family of products offers continuity of care, with a dosage form for every need:

- Oral concentrate or fast-acting injection for treatment of acute psychosis
- ▶ Tablets, oral concentrate, or elixir for oral maintenance
- Long-acting PROLIXIN DECANOATE® (fluphenazine decanoate injection) for depot maintenance

PROLIXIN® (fluphenazine hydrochloride) ORAL MAINTENANCE

Lowering the dose, lowering dose-related side effects

Please see brief summary on last page of this advertisement.

^{*} While the risk of extrapyramidal symptoms is increased with high-potency neuroleptics, these symptoms are usually dose-related and can generally be controlled by dosage adjustments.

Low-dose PROLIXIN (fluphenazine hydrochloride)



PROLIXIN® Tablets (fluphenazine hydrochloride tablets USP)

1, 2.5, 5, and 10 mg—bottles of 50 and 500, and Unimatic® unit-dose packs of 100



PROLIXIN® Oral Concentrate (fluphenazine hydrochloride oral solution)

 $5\ mg/mL$ in bottles of 120 mL with calibrated dropper

1 sugard 1 s

PROLIXIN® Elixir (fluphenazine hydrochloride elixir USP)

0.5 mg/mL—orange-flavored—in bottles of 473 mL (1 pint) and 60 mL dropper-assembly bottles



PROLIXIN® Injection (fluphenazine hydrochloride injection USP)

2.5 mg/mL in multiple-dose vials of 10 mL

*Please check the substitution laws in your state

PROLIXIN®

Fluphenazine Hydrochloride

TABLETS/ELIXIR/ORAL CONCENTRATE/INJECTION

PROLIXIN DECANOATE®

Fluphenazine Decanoate Injection

DESCRIPTION: Prolixin Tablets (Fluphenazine Hydrochloride Tablets USP) provide 1, 2.5, 5, or 10 mg fluphenazine hydrochloride per tablet. Prolixin 2.5, 5, and 10 mg tablets contain FD&C Yellow No. 5 (tartrazine). Prolixin Elixir (Fluphenazine Hydrochloride Elixir USP) provides 0.5 mg fluphenazine hydrochloride per mL (2.5 mg per 5 mL teaspoonful) with 14% alcohol by volume. Prolixin Oral Concentrate (Fluphenazine Hydrochloride Oral Solution*) provides 5 mg fluphenazine hydrochloride per mL, with 14% alcohol by volume (exceeds the USP monograph 1.2% limit). Prolixin Injection (Fluphenazine Hydrochloride Injection USP) provides 2.5 mg fluphenazine hydrochloride per mL; it contains 0.1% methylparaben and 0.01% propylparaben as preservatives. Prolixin Decanoate (Fluphenazine Decanoate Injection) provides 25 mg fluphenazine decanoate per mL in a sesame oil vehicle with 1.2% (w/v) benzyl alcohol as preservative.

CONTRAINDICATIONS: In the presence of suspected or established subcortical brain damage. In patients who have a blood dyscrasia or liver damage, or who are receiving large doses of hypnotics, or who are comatose or severely depressed. In patients who have shown hypersensitivity to fluphenazine; cross-sensitivity to phenothiazine derivatives may occur. Fluphenazine Decanoate is not intended for use in children under 12.

WARNINGS: Tardive Dyskinesia—potentially irreversible, involuntary, dyskinetic movements may develop. This syndrome appears to be most prevalent among the elderly, especially women; however, prevalence estimates do not reliably predict, at the inception of neuroleptic treatment, those patients likely to develop the syndrome. It is unknown if neuroleptics differ in their potential to cause tardive dyskinesia. The risk of developing the syndrome and the likelihood of its irreversibility are believed to increase as duration of treatment and cumulative dose increase. Although uncommon, the syndrome can develop after brief treatment at low doses. There is no known treatment for tardive dyskinesia, although partial or complete remission may occur with withdrawal of the neuroleptic. Neuroleptic treatment may suppress signs and symptoms of the syndrome and may mask the underlying disease process. The effect of symptomatic suppression on the long-term course of the syndrome is unknown. Neuroleptics should, thus, be prescribed with consideration for the potential of tardive dyskinesia. Chronic treatment should generally be reserved for patients with chronic illness that responds to neuroleptic drugs, and for whom alternative effective, less harmful treatments are not available or appropriate. Patients requiring chronic treatment should receive the smallest dose and shortest duration of treatment producing a satisfactory clinical response. Continuation of treatment should be reassessed periodically. If signs and symptoms of tardive dyskinesia appear, neuroleptic discontinuation should be considered. However, some patients may require continued treatment. (See PRECAUTIONS and ADVERSE REACTIONS.)

Mental and physical abilities required for driving a car or operating heavy machinery may be impaired by use of this drug. Potentiation of effects of alcohol may occur. Safety and efficacy in children have not been established because of inadequate experience in use in children. Severe adverse reactions, requiring immediate medical attention, may possibly occur.

Usage In Pregnancy: Safety for use during pregnancy has not been established; weigh possible hazards against potential benefits if administering any of these drugs to pregnant patients.

PRECAUTIONS: Caution must be exercised if another phenothiazine compound caused cholestatic jaundice, dermatoses or other allergic reactions because of the possibility of cross-sensitivity. Prolixin Tablets (Fluphenazine Hydrochloride Tablets USP) 2.5, 5, and 10 mg contain FD&C Yellow No. 5 (tartrazine) which may cause allergic-type reactions (including bronchial asthma) in certain susceptible individuals. Although the overall incidence of FD&C Yellow No. 5 (tartrazine) sen-

sitivity in the general population is low, it is frequently seen in patients who also have aspirin hypersensitivity. When psychotic patients on large doses of a phenothiazine drug are to undergo surgery, hypotensive phenomena should be watched for; less anesthetics or central nervous system depressants may be required. Because of added anticholinergic effects, fluphenazine may potentiate the effects of atropine.

Use fluphenazine cautiously in patients exposed to extreme heat or phosphorus insecticides; in patients with a history of convulsive disorders, since grand mal convulsions have occurred; and in patients with special medical disorders, such as mitral insufficiency or other cardiovascular diseases and pheochromocytoma. Bear in mind that with prolonged therapy there is the possibility of liver damage, pigmentary retinopathy, lenticular and corneal deposits, and development of irreversible dyskinesia.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Periodic checking of hepatic and renal functions and blood picture should be done. Monitor renal function of patients on long-term therapy; if BUN becomes abnormal, discontinue fluphenazine. "Silent pneumonias" are possible. Fluphenazine decanoate should be administered under the direction of a physician experienced in the clinical use of psychotropic drugs.

Information for Patients: It is likely that some patients exposed chronically to neuroleptics will develop tardive dyskinesia; full information should be given to all patients, if possible, who are candidates for chronic use. Informing patients and/or guardians must take into account clinical circumstances and patient competency.

Abrupt Withdrawal: In general, phenothiazines do not produce psychic dependence. However, gastritis, nausea and vomiting, dizziness, and tremulousness have been reported following abrupt cessation of high dose therapy; reports suggest that these symptoms can be reduced if concomitant antiparkinsonian agents are continued for several weeks after the phenothiazine is withdrawn.

ADVERSE REACTIONS: Central Nervous System: Extrapyramidal symptoms are most frequently reported. Most often these symptoms are reversible, but they may be persistent. They include pseudoparkinsonism, dystonia, dyskinesia, akathisia, oculogyric crises, opisthotonos, and hyperreflexia. Muscle rigidity sometimes accompanied by hyperthermia has been reported following use of fluphenazine decanoate. One can expect a higher incidence of such reactions with fluphenazine decanoate than with less potent piperazine derivatives or straight-chain phenothiazines. The incidence and severity of such reactions will depend more on individual patient sensitivity, but dosage level and patient age are also determinants. As these reactions may be alarming, the patient should be forewarned and reassured. These reactions can usually be controlled by administration of an antiparkinsonian drug such as benztropine mesylate and by subsequent reduction in dosage.

subsequent reduction in dosage.

Tardive Dyskinesia: See WARNINGS. Characterized by involuntary choreoathetoid movements involving tongue, face, mouth, lips, or jaw (e.g., tongue protrusion, puffing cheeks, puckering mouth, chewing movements), trunk and extremities. Severity and degree of impairment vary widely. May become clinically recognizable either during treatment, dosage reduction, or treatment withdrawal. To facilitate early detection, reduce dosage periodically (if clinically possible) and observe for signs of the disorder, especially since neuroleptics may mask the signs of the syndrome.

References: 1. Baldessarini RJ: Drugs and the treatment of psychiatric disorders, in Gilman AG, Goodman LS (eds): The Pharmacological Basis of Therapeutics, ed 6. New York, Macmillan Publishing Co, Inc., 1980, p 415. 2. Mason AS, Granacher RP: Clinical Handbook of Antipsychotic Drug Therapy. New York, Brunner/Mazel, 1980, pp 203, 221, 239.

Rare occurrences of neuroleptic malignant syndrome (NMS) have been reported in patients on neuroleptic therapy. The syndrome is characterized by hyperthermia, muscular rigidity, autonomic instability (labile blood pressure, tachycardia, diaphoresis), akinesia, and altered consciousness, sometimes progressing to stupor or coma. Leukocytosis, elevated CPK, liver function abnormalities, and acute renal failure may also occur. Neuroleptic therapy should be discontinued immediately and vigorous symptomatic treatment implemented

since the syndrome is potentially fatal.
Phenothiazine derivatives have been known to cause restlessness, excitement, or bizarre dreams; reactiva-tion or aggravation of psychotic processes may be encountered. If drowsiness or lethargy occurs, the dosage may need to be reduced. Dosages, far in excess of the recommended amounts, may induce a catatonic-

Autonomic Nervous System: Hypertension and fluctuations in blood pressure have been reported. Although hypotension is rarely a problem, patients with pheochromocytoma, cerebral vascular or renal insufficiency, or a severe cardiac reserve deficiency such as mitral insufficiency appear to be particularly prone to this reaction and should be observed carefully. Supportive measures including intravenous vasopressor drugs should be instituted immediately should severe hypotension occur; Levarterenol Bitartrate Injection is the most suitable drug; epinephrine should not be used since phenothiazine derivatives have been found to reverse its action. Nausea, loss of appetite, salivation, polyuria, perspiration, dry mouth, headache, and constipation may occur. Reducing or temporarily discontinuing the dosage will usually control these effects. Blurred vision. glaucoma, bladder paralysis, fecal impaction, paralytic ileus, tachycardia, or nasal congestion have occurred

in some patients on phenothiazine derivatives.

Metabolic and Endocrine: Weight change, peripheral edema, abnormal lactation, gynecomastia, menstrual irregularities, false results on pregnancy tests, impotency

in men and increased libido in women have occurred in some patients on phenothiazine therapy.

Allergic Reactions: Itching, erythema, urticaria, seborrhea, photosensitivity, eczema and exfoliative dermatitis have been reported with phenothiazines. The possibility of anaphylactoid reactions should be borne in mind.

Hematologic: Blood dyscrasias including leukopenia, agranulocytosis, thrombocytopenic or nonthrombocytopenic purpura, eosinophilia, and pancytopenia have been observed with phenothiazines. If soreness of the mouth, gums or throat, or any symptoms of upper respiratory infection occur and confirmatory leukocyte count indicates cellular depression, therapy should be discontinued and other appropriate measures instituted immediately.

Hepatic: Liver damage manifested by cholestatic jaundice, particularly during the first months of therapy, may occur; treatment should be discontinued. A cephalin flocculation increase, sometimes accompanied by alterations in other liver function tests, has been reported in patients who have had no clinical evidence of liver damage.

Others: Sudden deaths have been reported in hospitalized patients on phenothiazines. Previous brain damage or seizures may be predisposing factors. High doses should be avoided in known seizure patients. Shortly before death, several patients showed flare-ups of psychotic behavior patterns. Autopsy findings have usually revealed acute fulminating pneumonia or pneumonitis, aspiration of gastric contents, or intramyocardial lesions. Although not a general feature of fluphenazine, potentiation of central nervous system depressants such as opiates, analgesics, antihistamines, barbiturates and alcohol may occur.

Systemic lupus erythematosus-like syndrome, hypo-

tension severe enough to cause fatal cardiac arrest, altered electrocardiographic and electroencephalographic tracings, altered cerebrospinal fluid proteins, cerebral edema, asthma, laryngeal edema, and angioneurotic edema; with long-term use, skin pigmentation and lenticular and corneal opacities have occurred with phenothiazines. Local tissue reactions occur only rarely with injections of fluphenazine decanoate

HOW SUPPLIED: Tablets-1 mg, 2.5 mg, 5 mg, and 10 mg in bottles of 50, 100 and 500, and in Unimatic* cartons of 100. *Elixir*—in bottles of 473 mL (1 pint) and in 60 mL dropper-assembly bottles with calibrated dropper. Oral Concentrate—in bottles of 120 mL with calibrated dropper. Injection—in multiple-dose vials of 10 mL. Fluphenazine Decanoate—in 1 mL Unimatic* single dose preassembled syringes and 5 mL vials.

For full prescribing information, consult package serts. (J4-120/147/153/150)

CLINICAL DIRECTOR. STAFF PSYCHIATRIST: BOSTON

The Boston Psychiatric Group, P.C., has available a Clinical Director position and a staff psychiatrist position in metropolitan Boston.

These fulltime positions offer the chance to participate in an exciting mix of public sector and academic psychiatry. Opportunity to be part of a growing group practice with ownership of stock available. A non profit, low overhead research institute is affiliated with the practice to accept grants for physicians.

Applicant should have administrative and academic qualifications.

Excellent compensation package includes fringe benefits tailored to individual needs.

Minority and Spanish-speaking physicians especially sought.

> Send C.V. in confidence to: Richard C. Pillard, M.D. Boston Psychiatric Group, P.C. 85 E. Newton St. Boston, MA 02118

Excellent Practice Opportunity

PSYCHIATRIST

Park Place Hospital - a new 60-bed psychiatric facility - is offering a position for a board certified or board eligible psychiatrist. Located in Kissimmee, Florida - Park Place Hospital is in a tourist-centered area with a county population of approximately 90,000. The climate is warm year round with an abundance of lakes and recreation areas.

- Opportunity for private practice and salaried medical administration position
- New office building located near hospital
- Outstanding compensation package available, including paid relocation Please call or send curriculum vitae

Park Place Hospital



206 Park Place Kissimmee, Florida 32741 (305) 846-0444

Equal Opportunity Employer

THE AMERICAN JOURNAL OF PSYCHIATRY

Information for Contributors

GENERAL POLICIES

Manuscripts are accepted for consideration by the American Journal of Psychiatry with the understanding that they represent original material, have not been published previously, are not being considered for publication elsewhere, and have been approved by each author. Authors submitting manuscripts containing data or clinical observations already used in published papers or used in papers that are in press, submitted for publication, or to be submitted shortly should provide information on those papers to the Editor.

The requirements stated below are in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals."

Copyright

The Journal requires express transfer of copyright to the American Psychiatric Association so that the author(s) and the Association are protected from misuse of copyrighted material. The following statement must be signed by all authors of a manuscript:

In consideration of the American Journal of Psychiatry's taking action in reviewing and editing my submission [include title here] the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the American Psychiatric Association. I (we) warrant that this work represents original material and does not infringe upon the copyright of any third party and that the work has not been published previously, is not currently being considered for publication elsewhere, and will not be submitted for publication elsewhere unless and until it is rejected by the American Journal of Psychiatry. I (we) agree to indemnify the publisher against any loss or damages arising out of a breach of this warranty. In the event that my (our) submission is not published, copyright ownership shall revert to the author(s).

Work done as part of an individual's duties as a federal employee is in the public domain. In such cases the following wording should be used:

The work described in [include title here] was done as part of my (our) employment with the federal government and is therefore in the public domain. I (we) warrant that this work represents original material and does not infringe upon the copyright of any third party and that the work has not been published elsewhere, and will not be submitted for publication elsewhere unless and until it is rejected by *The American Journal Psychiatry*. I (we) agree to indemnify the publisher against any loss or damages arising out of a breach of this warranty.

In addition, authors must obtain letters of permission from publishers for use of extensive quotations (more than 500 words). The *Journal* does not publish tables or figures that have appeared in another English-language publication.

Disclosure of Commercial Interests

All forms of support, including drug company support, must be acknowledged in the author's footnote (see "Acknowledgments" under the Title Page section). Also, authors must disclose in their cover letter any commercial or financial involvements that might present an appearance of a conflict of interest in connection with the submitted article, including (but not limited to) institutional or corporate affiliations not already specified in the author's footnote, paid consultancies, stock ownership or other equity interests, and patent ownership. This information will be kept confidential and will not be shared with the reviewers. Such involvements will not be grounds for automatic rejection of the manuscript. Should the article be accepted for publication, the Editor and the authors will consult on whether, and to what extent, this information should be included in the published article.

Patient Anonymity

Ethical as well as legal considerations require careful attention to the protection of a patient's anonymity in case reports and elsewhere. Identifying information such as names, initials, hospital numbers, and dates must be avoided. In addition, authors should disguise identifying information about the characteristics and personal history of patients.

Informed Consent

Manuscripts that report the results of experimental investigation with human subjects must include a statement that informed consent was obtained after the procedure(s) had been fully explained. In the case of children, authors are asked to include information about whether the child's assent was obtained.

Review Process

All papers are reviewed by at least two experts to determine the originality, validity, and importance of content and conclusions. Authors will usually be advised within 3-4 months of the decision on their paper, although delays are sometimes unavoidable. Reviewers' comments will be returned with rejected manuscripts if they are judged to be useful to the authors. All reviewers remain anonymous.

SUBMISSION OF MANUSCRIPTS

The original manuscript and three copies should be submitted to John C. Nemiah, M.D., Editor, *American Journal of Psychiatry*, 1400 K St., N.W., Washington, DC 20005. All

correspondence will be sent to the first-named author unless otherwise specified. Papers should be accompanied by a cover letter indicating that the paper is intended for publication and specifying for which section of the *Journal* it is being submitted (i.e., Special Article, Regular Article, Brief Communication, or Clinical and Research Report); papers will only be reviewed after such a statement has been received from the author.

Authors will be notified of the receipt of their paper and the number assigned to it. This number must be included in all further correspondence. It is imperative that the corresponding author of submitted papers notify the *Journal* of changes of address.

Prompt Publication Policy

Papers submitted with the request for prompt publication must meet stringent criteria of originality and be of major, immediate importance. Authors must state their reasons for wanting prompt publication in a cover letter to the Editor. These papers are given priority in scheduling; however, authors should be aware that the minimum publication time is 4 months. (This policy is automatic for all Clinical and Research Reports.)

Single Case Reports

Single case reports except for detailed longitudinal studies should be submitted as Letters to the Editor. All single case reports will be peer reviewed. Reports of successfully treated patients should include data on the number of patients treated unsuccessfully by the same method, with an indication of the temporal order of the successes and failures.

Annual Meeting Papers

Authors may submit their papers before the annual meeting, but such papers cannot be published until after the meeting. All papers must be accompanied by a statement that they are in final form. These papers are subject to the same peer review as other papers and must conform to the requirements for one of the types of articles specified in the next section.

TYPES OF ARTICLES

Special Articles

These are usually overview articles that bring together important information on a topic of general interest to psychiatry. Authors who have ideas for such articles are advised to check with the Editor to ensure that a similar work is not already in preparation. Special Articles may not exceed 7,500 words (no more than 25 double-spaced pages—including a précis of no more than 100 words, tables, and figures) and may not include more than 100 references.

Regular Articles and Brief Communications

The only difference between these two types of papers is length. Regular Articles contain no more than 3,800 words, including a précis of no more than 100 words, references, tables, and figures. Brief Communications contain no more than 2,500 words, including a précis of no more than 100

words, references, tables, and figures. (A table or figure that fills one-half of a vertical manuscript page equals 100 words of text; one that fills one-half of a horizontal page equals 150 words.) Articles that exceed 3,800 words will be returned unreviewed to the authors.

Clinical and Research Reports

A prompt publication policy (i.e., publication within 4 to 6 months after acceptance) is in effect for Clinical and Research Reports. Manuscripts may contain no more than one table and a maximum of 10 references; figures may not be used. Papers may contain a maximum of 1,300 words, including a précis of no more than 40 words, text, re erences, and an optional table (estimate 15 words per reference, 100 words for a double-spaced table that fills one-half of a vertical page, and 150 words for a double-spaced table that fills one-half of a horizontal page). These articles present 1) new research findings, 2) data from pilot studies, 3; worthwhile replication studies, and 4) clinical studies involving a number of patients. Essays, program descriptions, literature reviews, and single case reports do not meet the criteria for this section. Submissions that exceed 1,300 words or contain figures will be returned to the author.

Other Sections

Letters to the Editor. Brief letters (maximum of 500 words and 5 references; no tables or figures) will be considered if they include the notation "for publication." The number of words should appear in the upper right corner. Letters critical of an article published in the Journal will automatically be sent to the authors for reply. Because of space limitations not all letters can be printed. The Journal will notify authors about the disposition of their letters but does not return those that are not published. A letter must be signed by all of its authors. All letters will be edited; edited letters will not be sent to authors for approval. Letters must be typed double-spaced throughout on 8½×11 inch paper; two copies are required. Letters that do not meet these specifications will be returned for revision. Reprints are not available. Single case reports except for detailed longitudinal studies should be submitted as Letters to the Editor. Case reports submitted as Letters to the Editor will be peer reviewed.

Book Forum. Books for review may be sent to the Book Forum Editor, Nancy C. Andreasen, M.D., Ph.D., University of Iowa College of Medicine, 500 Newton Rd., Iowa City, IA 52242. Book reviews are usually solicited by the Book Forum Editor. Authors interested in reviewing a particular book should communicate directly with Dr. Andreasen. Reprints of reviews are not available.

TYPING AND ARRANGING THE PAPER

All parts of the manuscript, including case reports. quotations, references, and tables, must be double-spaced throughout. Manuscripts must be typed in upper- and lowercase on one side only of $8\frac{1}{2}\times11$ inch nonerasable bond paper. All four margins must be $1\frac{1}{2}$ inches. The manuscript should be arranged in the following order, with each item beginning a new page: 1) title page, 2) précis, 3) text, 4) references, and 5) tables and/or figures. All pages must be numbere l.

STYLE SPECIFICATIONS

Title Page

The number of words, tables, and figures in the paper and the telephone number of the corresponding author should be typed in the upper right-hand corner of the title page. At least three key words that describe the content of the paper should be typed in the lower right corner of the page.

Title. The title should be informative and as brief as

possible. Two-part titles should be avoided.

By-line. Authors listed in the by-line should be limited to principal researchers and/or writers; collaborators may be acknowledged in a footnote. Authors' first names are preferred to initials. Degrees should be included after each author's name.

Previous presentation. If the paper has been presented at a meeting, please give the name of the meeting, the place, and the inclusive dates.

Location of work and address for reprints. Provide the department, institution, city, and state where the work was done. Include a full address for the author who is to receive reprint requests.

Acknowledgments. Grant support should be acknowledged in a separate paragraph and should include the full name of the granting agency and grant number. Acknowledgment of individuals may be no longer than four typed lines. Drug company support of any kind must be acknowledged.

Précis

The précis, or short abstract, is a single paragraph no longer than 100 words for Special Articles, Regular Articles, and Brief Communications and no longer than 40 words for Clinical and Research Reports. Authors should use the active voice and the third person.

Text

Authors should use the active voice and first person; headings and subheadings should be inserted at reasonable intervals. Footnotes to text may not be used, and summaries are usually unnecessary.

Research design and statistics. The following information regarding research design should be included: 1) a clearly stated hypothesis, 2) the names of the statistical tests used, 3) whether tests were one- or two-tailed, and 4) what test was used for each set of data. Reporting of standard deviations, rather than standard errors of the mean, is required. Statistical tests that are not well known should be referenced. All significant and important nonsignificant results must include the test value, degree(s) of freedom, and probability. For example, "The analysis of variance indicated that those who abstained from coffee had significantly higher course grades than those who did not abstain (F=4.32, df=3, 17, p<.05)." Reviewers will evaluate the appropriateness of

Abbreviations. Spell out all abbreviations (other than those for units of measure) the first time they are used. Idiosyncratic abbreviations should not be used.

Drugs. Generic rather than trade names of drugs should be used. Trade or manufacturers' names are used only if the drug or equipment is experimental or unavailable in this country or if such information is crucial to the evaluation of the results or replication of the study.

Tables and Figures

The Journal does not publish tables or figures that have appeared in other English-language publications. Tables and figures that duplicate 1) material contained in text or 2) each other will not be used. Authors will be asked to delete tables and figures that contain data which could be given succinctly in text. Each table and figure should be understandable without reference to the text; a descriptive, concise title should be included and units of measurement should be specified. Consult recent issues of the Journal for format. A table or figure that fills one-half of a vertical manuscript page equals 100 words of text; one that fills one-half of a horizontal page equals 150 words. A copy of each table and figure must be included with each copy of the manuscript.

Tables. Tables are reserved for presentation of numerical data and should not be used as lists or charts. Values expressed in the same unit of measurement should read down, not across; when percentages are given, the appropriate numbers must also be given. Tables should be doublespaced, no wider than 120 typewriter characters, including spaces, and no longer than 70 lines.

Figures. Figures express trends or relationships between data. Figures that contain numerical data which could be expressed more succinctly or clearly in tabular form will be converted to tables. Figures should be submitted as glossy or other camera-ready prints, and the author's name and the title of the paper should be written on a label affixed to the back of the figure. Figures must be able to withstand reduction to about 31/4 inches.

References

References are numbered and listed by their order of appearance in text; the text citation is followed by the appropriate reference number in parentheses. Do not arrange the list alphabetically.

References should be restricted to closely pertinent material. Accuracy of citation is the author's responsibility. References should conform exactly to the original spelling, accents, punctuation, etc. Authors should be sure that all references listed have been cited in text.

Personal communications, unpublished manuscripts, manuscripts submitted but not yet accepted, and similar unpublished items should not appear in the reference list. Such citations may be noted in text. It is the author's responsibility to obtain permission to refer to another individual's unpublished observations. Manuscripts that are actually "in press" may be cited as such in the reference list; the name of the journal or publisher and location must be included.

Type references in the style shown below, double-spaced throughout. List up to three authors; designate one or more authors past the third as "et al." Abbreviations of journal names should conform to the style used in Index Medicus; journals not indexed there should not be abbreviated.

1. Stone AA: Mental Health and Law: A System in Transition.

 Rockville, Md, NIMH, 1975, pp 102–103
 Glick ID, Hargreaves WA, Drues J, et al: Short versus long hospitation, a prospective controlled study, VII: two year follow-up results for nonschizophrenics. Arch Gen Psychiatry 1077, 24 2314, 2300 1977; 34:314–320

3. Rubinow DR, Post RM, Pickar D, et al: Relationship between

- urinary-free cortisol and CSF opiate binding activity in depressed patients and normal volunteers. Psychiatry Research (in press)
- McNamara JR (ed): Behavioral Approaches to Medicine. New York, Plenum Press, 1979
- Janowsky DS, Judd LL, Huey L, et al: Effects of naloxone in normal, manic and schizophrenic patients: evidence for alleviation of manic symptoms, in Endorphins in Mental Health Research. Edited by Usdin E, Bunney WE Jr, Kline NS. New York, Oxford University Press, 1979
- Smythe GA, Compton PJ, Lazarus L: Serotoninergic control of human growth hormone secretion: the actions of L-dopa and 2bromo-α-ergocyptine. Excerpta Medica International Congress Series 1976; 381:222-235

PROCESSING OF ACCEPTED MANUSCRIPTS

Manuscripts are accepted with the understanding that the Editor and the editorial staff have the right to make revisions aimed at greater conciseness, clarity, and conformity with *Journal* style.

Accepted papers will be edited and sent to the first-named (or corresponding) author for corrections and answers to editorial queries. No proofs are sent to authors. Authors who will be away from their offices for a long period or who change address after notification of acceptance should inform the *Journal* staff.

PERMISSION TO REPRINT

Written permission to reprint material published in the Journal must be secured from the APA Publications Services Division, 1400 K St., N.W., Washington, DC 20005; there is usually a charge for such permission, except for nonprofit classroom or library reserve use by instructors and educational institutions or for authors who wish to reprint their own material. Requests will be facilitated if accompanied by written permission from the author of the material.

REPRINTS

No reprints are furnished gratis. An order form for reprints will be sent to the corresponding author before publication of the paper. The printer usually mails reprints approximately 6 weeks after the article has been published. Reprints of items in the Book Forum and Letters to the Editor sections are not available.

New titles in Psychiatry from Grune & Stratton, Inc.!

PRINCIPLES OF MEDICAL PSYCHIATRY

Alan Stoudemire

Barry S. Fogel

Assistant Professor of Psychiatry Emory University S. O. M. The Emory Clinic, Atlanta, Georgia Assistant Professor of Psychiatry and Human Behavior
Brown University
Providence, Rhode Island

Principles of Medical Psychiatry provides a comprehensive approach for the practicing clinician that covers all aspects of medical-surgical treatment of the psychiatric patient. The text addresses the fact that many psychiatric patients may also suffer form medical problems, and, by incorporating DSM III terminology within the text, presents a practical and complete orientation to the many aspects of diagnosis and treatment of these patients.

Opening chapters focus on the principles and assessment of psychiatric problems in medical-surgical patients. The treatment of the psychiatric patient facing medical problems as well as specific disorders associated with hospitalized psychiatric patients are also presented. Management of pain, cardiovascular risk, intensive care, and surgery and trauma is thoroughly discussed as well. Discussion of specific medical problems is also included for the clinician contemplating cardiovascular, oncology, neurologic, pulmonary, gastroenterology, renal, obstetric or endocrine complications.

For the practicing psychiatrist or psychiatric resident who desires up-to-date coverage of medical-surgical problems in psychiatric patients, the *Principles of Medical Psychiatry* is highly recommended.

September 1987, approx. 672 pp., approx. \$79.50/ISBN: 0-8089-1883-4, Order Code: 794376

MARITAL AND FAMILY THERAPY, Third Edition

Ira D. Glick, M.D.

John F. Clarkin, Ph.D.

David R. Kessler, M.D.

Professor of Psychiatry Cornell University Medical College Associate Medical Director for Inpatient Services Payne Whitney Clinic The New York Hospital-Cornell Medical Center New York, New York Professor of Clinical Psychology in Psychiatry Cornell University Medical College Director of Psychology Westchester Division The New York Hospital-Cornell Medical Center White Plains, New York Clinical Professor of Psychiatry School of Medicine University of California, San Francisco Staff Psychiatrist Langley Porter Psychiatric Institute San Francisco, California

The third edition of this classic text has been substantially rewritten. It reflects changes in the field including the evaluation, diagnosis, and intervention strategies inherent to marital and family therapy. A greatly expanded section on family evaluation includes a discussion of the process, the content, and the tools needed as well as new information on the formulation of the crucial family problem areas. New chapters on family treatment in the context of violence and chronic mental illness are provided. This edition also covers the treatment of new and traditional family forms including dual career marriages and gay couples. The most significant change is an update and embedding within systems theory of the core marital and family techniques described.

New clinical examples and case transcripts are included, references for each chapter have been updated, and suggested readings added. The incorporation of DSM-III-R, the American Psychiatric Association's latest revision of the Diagnostic and Statistical Manual of Mental Disorders into the discussion of family treatment in psychiatric disorders enhances the text's usefulness. It has streamlined the latest in research findings, clinical reports, and teaching techniques into clear and practical guidelines. It has been broadened to include other specific material applicable to European, Latin American, and Asian countries.

MARITAL AND FAMILY THERAPY, Third Edition is highly recommended for both medical and non-medical family therapists including psychiatrists, psychologists, social workers, other mental health professionals, and the clergy as the definitive text in this expanding field. For attorneys, other physicians, and teachers who work with families, this text will provide critical, up-to-date reading.

1987, 672 pp., \$39.50/ISBN: 0-8089-1878-8, Order Code: 791591

THE TECHNIQUE OF PSYCHOTHERAPY, Fourth Edition

Lewis R. Wolberg, M.D.

Clinical Professor of Psychiatry New York University School of Medicine Founder and Emeritus Dean Postgraduate Center of Mental Health New York, New York

November 1987, approx. 1536 pp., approx. \$99.50 ISBN: 0-8089-1877-X, Order Code: 794866

Reviews from The Technique of Psychotherapy, Third Edition

"This is a magnum opus that represents years of careful work on the part of the author. It is the most careful work on the part of the author. It is the most complete and thoroughly prepared book of this sort that has ever been published in the United States and one of the most broadly organized and well presented."

-New England Journal of Medicine

Like the first three editions of *The Technique of Psychotherapy*, the fourth edition is a classic, authoritative text containing a compendium of information indispensable to the beginning and advanced psychotherapist. Thoroughly updated, the fourth

edition presents new information, reorganizes material of prior editions and reflects new directions and emphases within the field of psychiatry.

Practicing psychiatrists and psychologists will find *The Technique of Psychotherapy*, *Fourth Edition* critical reading. Psychiatric nurses and social workers will appreciate this definitive reference.

G&S GRUNE & STRATTON, INC. Harcourt B 465 South Lincoln Dr., Troy, Missouri 633: Please enter the following order:	·
ORDER CODE AUTHOR/TITLE/	OLUME NO.
Please check if you are a Grune & Stration or Academic Press author. U.S. Customors: Payment will be relunded for littles on which shipment is not possible within 120 days.	SAVE: Prepay or use your credit card and we pay postage and handling.
Prices are in U.S. dollars and are subject to change without notice,	Please chack one box:
Name(Plasse print)	Payment Enclosed (add applicable sales tax)
Specialty	American Express Diners Club
Address	☐ MasterCard ☐ Visa ☐ Bit Me
City/State/Zip	Charge Card #
Signaluro	Expiration Date (mo/yr)



PSYCHIATRIST

Due to expansion and growth, 45 member multispecialty group practice has an opening for a Board Eligible/Board Certified Psychiatrist. Our group provides all the medical services for a 40,000+ member HMO and our own private pay patients. We offer a competitive salary structure and fringe benefit package to include participation owner of the medical group and coverage of virtually all practice expenses. We welcome inquiries for psychiatrists interested in merging their existing practices with ours. Our practice environment is challenging and professionally stimulating. Forward inquiries and C.V.'s to:

Search Committee Group Health Associates, Inc. 2915 Clifton Avenue Cincinnati, Ohio 45220

UPPER MICHIGAN

An opportunity for a private practice psychiatrist exists in this attractive Upper Michigan community with potential for joining an existing group practice. Advantages include:

- Progressive regional referral hospital with inpatient psychiatric unit plus major expansion of inpatient and cutpatient services planned.
- A semi-rural university community with numerous outdoor recreational opportunities.
- Start-up and relocation assis.ance available.

Send curriculum vitae to:

Office of Medical Staff Affairs Marquette General Hospital 420 W. Magnetic Street Marquette, MI 49855

The Sixteenth Annual

CLINICAL NEUROLOGY FOR PSYCHIATRISTS

Directed by

David M. Kaufman, M.D.

Disney World, Orlando, Florida: Buena Vista Palace Hotel, Walt Disney World Village Lake Buena Vista, FL 32830 January 29-31, 1988

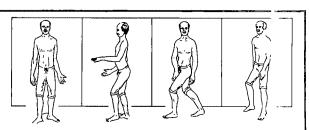
Los Angeles, California: Westwood Plaza Holiday Inn 10740 Wilshire Boulevard, Westwood, Los Angeles, CA 90024 February 19-21, 1988

New York City, New York: The Japan Society 333 East 47th Street, New York, NY 10017 March 11-13, 1988

THE EXPLICIT, CLEAR, & CONCISE WEEKEND PROGRAM

This intensive three-day program, 8:30 am to 5 pm daily, prepares psychiatrists for the American Board of Psychiatry and Neurology. Through extensive use of review sessions, videotape, slides, practice questions and Clinical Neurology for Psychiatrists, Kaufman-(Grune & Stratton), participants cover: dementia, memory disorders, aphasia, anosognosia, and other perceptual disorders; partial complex and other seizures; neurotransmitter basis of pain; mental as well as physical effects of dominant and non-dominant hemisphere injuries, spinal cord lesions, and peripheral nervous system diseases; dementia and other neurologic manifestations of AIDS; sleep disorders; and CT, MRI, EEG, and CSF analysis.

Approved for 30 Category I CME Credits by Montefiore Medical Center/Albert Einstein College of Medicine



For more information, call (212) 920-6674; or mail coupon with check made payable to Continuing Medical Education for \$350 tuition to: Office of Continuing Medical Education, Montefiore Medical Center, 3301 Bainbridge Avenue, Bronx, NY 10467. (Tuition covers all materials and textbook. To order textbook only, enclose \$50.00 with coupon.)

Please register me for the sixteenth annual course Clinical Neurology for Psychiatrists (enclose tuition, \$350, US funds; make checks payable to Continuing Medical Education).	1 1 1 1
Disney World: ☐ Los Angeles: ☐ New York: ☐	
☐ Please send me the textbook Clinical Neurology for Psychiatrists only (enclose check, \$50.00 payable to "Clinical Neurology").	1
Are you a psychiatrist? yes □ no □	į
Are you preparing for ABPN? yes □ no □	ŀ
	i
Name	i
Street	!
City State Zip	
Telephone	:
office home	A

Adolescent & Adult Psychiatrist

Adolescent Psychiatrist and Adult Psychiatrist needed to join the expanding 18 member Marshfield Clinic Psychiatry Department currently comprised of one Adolescent and five Adult Psychiatrists, six Clinical Psychologists and six Psychiatric Social Workers. Marshfield Clinic has 250 medical specialists and staffs an adjacent 524 bed acute care teaching hospital that includes a 41 bed Psychiatry Unit. Psychiatrists divide time between outpatient and Hospital practice. Attractive salary plus extensive fringe benefits. Send curriculum vitae plus the names of several references to:

Mr. John P. Folz Director, Patient Services

1000 North Oak Ave Marshfield, Wi 54449 or call collect at (715) 387-5181

MarshfieldClinic

EXPERIENCE A NEW DIMENSION IN EXCELLENCE

A UNIQUE OPPORTUNITY FOR A BOARD CERTIFIED PSYCHIATRIST TO BECOME AN ASSISTANT CHAIRMAN OF PSYCHIATRY AND THE MEDICAL DIRECTOR OF A PROGRESSIVE MENTAL HEALTH FACILITY

The Department of Mental Health, Mental Retardation and Substance Abuse Services and the Medical College of Virginia/Virginia Commonwealth University have created an opportunity for an experienced individual who enjoys teaching/research and administering to the needs of patients. Central State Hospital is a stimulating and professionally motivating 650-bed J.C.A.H. accredited facility, providing treatment and care for acute and chronic adolescent, adult and forensic patients. MCV/VCU is one of the nation's finest and largest teaching/research institutions.

Together, these agencies offer the maximum potential for personal and professional growth in addition to offering a competitive salary, excellent professional relationships and providing the opportunity to reside in one of the most livable cities in the United States.

This position closes at 5:00 p.m., Friday, November 6, 1987. For more information contact:

Olivia J. Garland DIRECTOR CENTRAL STATE HOSPITAL P.O. BOX 4030 PETERSBURG, VIRGINIA 23803 TELEPHONE: (804) 524-7373

Dr. Joel J. Silverman PROFESSOR AND CHAIRMAN DEPARTMENT OF PSYCHIATRY MEDICAL COLLEGE OF VIRGINIA BOX 710

BOX 710 RICHMOND, VIRGINIA 23298 TELEPHONE: (804) 786-9157

EOE/AA

INPATIENT SERVICE DIRECTOR

We are looking for a creative individual who wants to use both administrative and clinical skills in the coordination, supervision, and service delivery of psychiatric functions for a large urban CMHC. We have easy access to Major universities and 4-season recreational opportunities. Must be Board eligible or certified in Psychiatry and licensed in Michigan by time of hire. Position also required 5 years of experience with psychiatric patients, including both clinical and administrative experience. Salary range of \$82,740-\$109,441, with excellent fringe package.

Send letter of application and resume to Personnel Dept., Genesee County Community Mental Health Services, 420 W. 5th Avenue, Flint, Michigan 48503.



Equal Opportunity Employer

CHAIRMAN AND MEDICAL DIRECTOR— DEPARTMENT OF PSYCHIATRY

Christ Hospital and Medical Center, one of Illinois' most valued medical resources, is seeking a Board Certified Psychiatrist to fill this prestigious position.

An 824-bed teaching center serving southwest Chicago and suburbs, we are the leading Chicago area hospital for acute psychiatric admissions. We are one of four hospitals of the Evangelical Hospitals Corporation, one of the most outstanding and innovative health care systems in the Chicago region.

Our Department of Psychiatry, consisting of a 140-bed inpatient facility and a 27 patient capacity partial hospitalization program, provides services to children, adolescent, adult, geriatric, and chemical and substance abuse patients.

The Chairman and Medical Director will direct the overall administrative and clinical activities of the Department of Psychiatry to ensure quality patient care. The candidate chosen will be expected to develop a long range strategy to build and expand Mental Health Services; and to establish Christ Hospital as the premier center for the treatment of psychiatric, chemical and alcohol dependency disorders in the Midwest.

Qualifications include a minimum of five years of clinical practice in Psychiatry and experience in administrative responsibilities; certification by the American Board of Psychiatry and Neurology. Licensure in the State of Illinois is required.

Submit C.V. to: William Adair, M.D., Chairman, Search Committee, CHRIST HOSPITAL AND MEDICAL CENTER, 4440 W. 95th St., Oak Lawn, IL 60453. Equal Opportunity Employer M/F.



Evangelical Health Systems

Christ Hospital and Medical Center

THE BRITISH JOURNAL OF PSYCHIATRY

	J		
	SEPTEMBER 1987	VOLUME 151	The second second
	oday: further consideration of the	e essence of psychotherapy. S.E.	
Greben			283
Review Article			
Pathology, pheno McKenna	omenology and the dopamine hy	pothesis of schizophrenia. P.J.	288
Papers			
psychiatric disor	relationship between genetic and ders. L.R. Goldin, L.E. DeLisi a	nd E.S. Gershon	302
Lewis, A.M. Rev	radic distinction as a strategy in s veley, M.A. Reveley, B. Chitkara	and R.M. Murray	306
Macmillan et al	on and relapse in first episodes o (1986). J. Mintz, L. Mintz and M	1. Goldstein	314
T.J. Crow, A.L.	on and relapse in first episodes o Johnson and E.C. Johnstone	-	320
schizophrenia. J.		-	324
chronic schizoph	anoate v. fluphenazine decanoate crenic in-patients. J.P. McKane, A and G.S. Stirling		333
	nparison of fluoxetine and amitri Coleman and M.H. Lader	ptyline in depressed out-patients.	337
	down syndrome in the elderly po y. T.S. Radebaugh, F.J. Hooper a	opulation living in the community: nd E.M. Gruenberg	341
Quality of life for hostel. J.S. Gibbo	or 'new' long-stay psychiatric in-pons and J.P. Butler	patients: the effects of moving to a	347
Can categorical a Grayson	and dimensional views of psychia	atric illness be distinguished? D.A.	355
-	•	natural disaster. A.C. McFarlane	362
•	ues in post-partum and post-ope	•	368
	alth Questionnaire and the detect ners: a replicated study. A.P. Boa		373
•	very from alcoholism. G. Nordst		382
Alcohol, other di	-	ytic effectiveness: a comparison of	389
Point of View			
	do they contribute to the good p developing countries? J. Stevens	rognosis and equal prevalence of	393
Brief Reports			
-	de la Tourette's syndrome in Sau	di Arabia. A. El-Assra	397
Sexual aggressivi	ty and androgens. J. Raboch, H.	Černá and P. Zemek	398
Capgras syndron	senile dementia of Alzheimer typne, de Clérambault's syndrome, a	oe. W.C. Drevets and E.H. Rubin and folie à deux. S.F. Signer and	400
S.R. Ibister			402
De Clérambault's	s syndrome in organic affective d	isorder: two cases. S.F. Signer and	404

STATE OF KUWAIT KUWAIT UNIVERSITY

DEPARTMENT OF PSYCHOLOGY

The Department of Psychology, has openings at the rank of professor, assistant professor (associate professor) and lecturer (assistant professor) tenable September 1, 1988, for specialties in psychology of learning and cognitive processes, psychological statistics with emphasis on computer, experimental, social, developmental, clinical, and research methods in behavioral sciences. The language of instruction is Arabic. All candidates must possess the Ph.D. at the time of application. Application forms and conditions of service can be obtained from: Kuwait University Office, 3500 International Drive, N.W., Washington, D.C. 20008. Applications must be accompanied by non-returnable copies of academic credentials and representative publications. These must be sent directly to: Dean, College of Arts, Kuwait University, P.O. Box 23558, 13096 Safat, KUWAIT and must be received in Kuwait by November 30, 1987.



CHAPEL HILL PSYCHIATRY RESEARCH FELLOWSHIPS

A one- or two-year clinical research fellowship in psychiatry is being jointly sponsored by the University of North Carolina at Chapel Hill and Burroughs Wellcome Co., Research Triangle Park (near Chapel Hill). This fellowship is available July 1, 1988 to applicants who have completed a psychiatry residency. Participating UNC faculty members include: Dr. Arthur Prange, Jr. (Psychoendocrinology), Dr. David Janowsky (Psychopharmacology), Dr. J.C. Garbutt (Psychoendocrinology), Dr. Dwight Evans (Psychoimmunology), Dr. George Breese (Behavioral Pharmacology), Dr. Richard Mailman (Biochemical Pharmacology), Dr. Jack Haggerty (Neuroendocrinology), Dr. Tom Gualtieri (Developmental Neuropsychiatry), Dr. Cort Pedersen (Psychoendocrinology), and Dr. Robert Golden (Psychopharmacology). Program includes 1) clinical research activities at UNC and, 2) activities associated with the development of new drugs at Burroughs Wellcome Co., involving instruction in research methodology, the designing of protocols, and conducting studies at investigational sites throughout the United States.

Applicants should submit a letter describing their personal goals as they relate to the fellowship purposes and training, a curriculum vitae, and three professional references to:

Dr. Arthur J. Prange, Jr. Professor, Department of Psychiatry 208 Bio-Sciences Research Center, 220-H Medical School University of North Carolina Chapel Hill, NC 27514

The University of North Carolina is an EO/AAE and minorities and women are encouraged to voluntarily identify themselves. Applicants must respond by January 15, 1988.



PSYCHIATRISTS

Psychiatrist positions available for inpatient and outpatient programs in V.A. Medical Center closely affiliated with Jefferson Medical College. Opportunity for teaching and research. Full-time preferred; part-time considered. Board certified or board eligible. Inpatient position on dynamic Acute Admission Unit with other psychiatrists, trainees and excellent interdisciplinary team. Outpatient position in Mental Hygiene Clinic.

Competitive salaries plus incentive pay with malpractice coverage and excellent fringe benefits. Located in beautiful historic Chester County in the Brandywine River Valley with horse farms, excellent schools and diverse outdoor recreational opportunities. Near Pennsylvania Dutch Country and only minutes from downtown Philadelphia and medical school. Contact James J. Nocks, M.D., Chief of Staff, VA Medical Center, Coatesville, PA 19320, Telephone (215) 383-0219.

> VA MEDICAL CENTER COATESVILLE, PA 19320



MEDICAL DIRECTOR \$125,000 +

One of New England's newest, most modern, fully JCAH accredited, private psychiatric hospitals, located less than 1 hour from Boston, now has an exciting opening for a Board certified psychiatrist to be MEDICAL DIRECTOR. This position will give you:

- An excellent income consisting of a starting salary of at least \$125,000 plus generous fringe benefits worth over 25% of salary including: health, life, and professional liability insurance; liberal allowance for professional development; pension plan; over 6 weeks holiday/vacation leave, etc.
- An outstanding opportunity as chief operational medical officer to exercise your leadership, administrative, clinical, and supervisory skills while having broad responsibility over the entire medical staff and playing a major role in program and policy planning of this actively growing, dynamic hospital.
- An academic affiliation with one of Boston's leading medical schools with the possibility of teaching and research.

RESUMES TO:
Physician Recruitment
Boston Management Resources
1018 Beacon Street
Brookline, MA 02146
(617) 731-2828
An Equal Opportunity Employer

Research Training Fellowships MD's and PhD's

The Eating Disorders Institute of The New York Hospital-Cornell Medical Center, Westchester Division, has received a grant to offer a new program of post-graduate research training in the study of appetite, eating, and weight regulation in patients with eating disorders and mood disorders. Projects encompass both clinical and laboratory research. The training program is sponsored jointly by the NIMH (T32-MH18903) and the Department of Psychiatry, Cornell University Medical College.

The Eating Disorders Institute, a clinical, research and training facility, includes a 24-bed inpatient unit and the internationally recognized Edward W. Bourne Behavorial Research Laboratory. The Institute is located on the suburban campus of the Westchester Division, a full psychiatric center providing inpatient, outpatient, and day hospital treatment for children, ado-

lescents and adults.

Positions are offered for 1-2 years and stipends are competitive.

Women and minority members are encouraged to apply.

Send letters of interest and C.V.'s to:

Gerard P. Smith, MD, Director
Eating Disorders Institute
The New York Hospital-Cornell Medical Center
Westchester Division
21 Bloomingdale Road
White Plains, NY 10605

PSYCHIATRISTS:

Opportunities for relocating or starting a new psychiatric practice now exist with a financially strong, rapidly growing health care firm. Adult, adolescent, geriatric, chemical dependency and general psychiatric practitioners are being sought for possible joint venture practice partnerships, subsidies and/or hospital staff positions. Locations of interests include Arkansas, Florida, Georgia, Mississippi, Oklahoma, Pennsylvania, Tennessee and others. Board-Certified, Board-eligible and new residency graduates should inquire.

For confidential interview appointment, call Gary Silcox, Vice President, (615) 870-5110 or write G. Michael Schmits, M.D., Corporate Medical Director, Greenleaf Health Systems, Inc., Suite 301-Greenleaf Building, Two Northgate Park, Chattanooga, Tennessee 37415.





Nominations should be sent no later than November 16, 1987 to:

William L. Webb, Jr., M.D. Psychiatrist-in-Chief The Institute of Living 400 Washington Street Hartford, CT 06106 he Institute of Living has established the C. Charles Burlingame Award to honor Dr. Burlingame, psychiatrist-in-chief from 1931 to 1950. Through his pioneering efforts, Dr. Burlingame established The Institute as a preeminent center for patient care, education and research.

The Burlingame Award, to be given annually, will honor an outstanding leader in psychiatric education and research. We invite you to nominate a person who has significantly advanced the field of psychiatry through creative teaching or investigation. The nomination should include a current curriculum vitae and two letters of support describing the candidate's achievements.

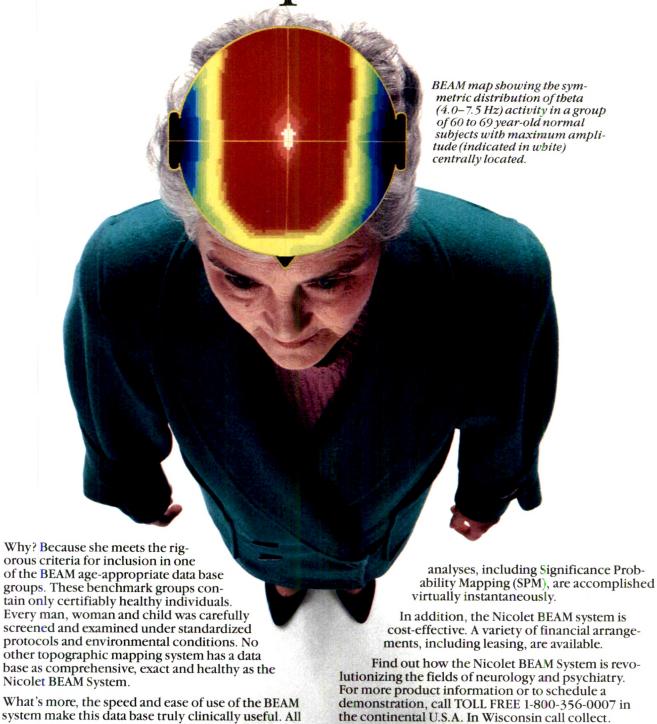
The winner of The Institute of Living Burlingame Award will be notified by December 30, 1987 and invited to present an original research paper as the focal point of the award day events. The award, which will be presented at The Institute in April 1988, includes a commemorative certificate and a \$2000 honorarium and expenses.

The Institute of Living is the nation's largest, not-for-profit psychiatric hospital, and one of the oldest. A fully accredited teaching hospital, The Institute is one of the country's foremost psychiatric centers for patient care, education and research.



THE INSTITUTE OF LIVING

This Person Makes the Nicolet BEAM System Exceptional!

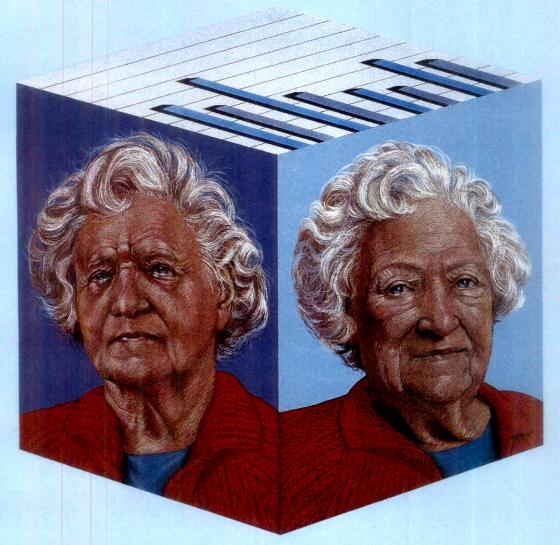


Nicolet Biomedical Instruments

Electrophysiology Yesterday, Today, Tomorrow

New Data on Low-Dose Trifluoperazine:

Reduced Symptoms in 86% of **Disturbed Elderly Patients**



Stelazine

trifluoperazine HCI Tablets: 1, 2, 5 and 10 mg. Concentrate: 10 mg./mL.

Before prescribing, please see adjacent page for a brief summary of prescribing information.

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. The following is a brief summary.

Contraindications: Comatose or greatly depressed states due to C.N.S. depressants, blood dyscrasias; bone marrow depression; liver damage.

depressants, blood dyscrasias; bone marriow depression; liver damage.

Warnings: Tardive dyskinesia [TD] may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively brief treatment at low doses. There is no known treatment for TD, although it may remit if neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatresponds to neurolepius afron whom alternative, effective, less training treatments are not available or appropriate. In patients requiring chronic treat-ment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. If signs and symp-toms of TD appear, discontinuation of neuroleptics should be considered. [See PRECAUTIONS.]

Neuroleptic Malignant Syndrome [NMS], a potentially fatal symptom complex has been reported in association with antipsychotic drugs. Clinical manifestations include: Hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability.

The management of NMS should include 1) immediate discontinuation of anti-psychotic drugs and other drugs not essential to concurrent therapy, 2) inten-sive symptomatic treatment and medical monitoring, and 3) treatment, if available, of any concomitant serious medical problems.

'Stelazine' Concentrate contains sodium bisulfite, which may cause allergic type reactions including anaphylactic symptoms or asthmatic episodes in cer-tain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and probably low and is seen more frequently in asthmatic than in non-asthmatic people.

asthmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive (e.g., have had blood dyscrasias, jaundice) to any phenothiazine. Caution patients about activities requiring alertness (e.g., operating vehicles or machinery), especially during the first few days' therapy. Additive depressant effect is possible with other C.N.S. depressants, including alcohol. Do not use in pregnancy except when essential and potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuroleptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is contemplated

Use cautiously in angina. Avoid high doses and parenteral use when cardio-vascular system is impaired since hypotension has occurred. Antiemetic effect may mask the signs of overdosage of other drugs or obscure diagnosis and treatment of certain physical disorders. Prolonged use of high doses may result in cumulative effects with severe C. N.S. or vasomotor symptoms. If retinal changes occur, discontinue drug. Agranulocytosis, thrombocytopenia, pancytopenia, anemia, cholestatic jaundice, liver damage have been reported. Use cautiously in patients with glaucoma.

reported. Use cautiously in patients with glaucoma. Patients with a history of flong-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent in vitro, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

to extreme heat.

Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenergic blockade. Concomitant use of phenothiazines with propranolol increases plasma levels of both drugs. Concurrent use of phenothiazines may counteract antihypertensive effects of guanethidine and related compounds. Thiazide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytoin toxicity, dosage adjustments of anticonvulsarits may be necessary. If neuromuscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive 'Estazine' 48 hours before or 24 hours after myelography with the contrast medium metrizamide. The presence of phenothiazines may produce false positive phenylketonuria [PKU] test results.

**Adverse **Paest Inns: D'rowsiness diginges skin reactions rash dry mouth

Adverse Reactions: Drowsiness, dizziness, skin reactions, rash, dry mouth, insomnia, amenorrhea, fatigue, muscular weakness, anorexia, lactation, blurred vision. Neuromuscular (extrapyramidal) reactions: motor restlessness, dystonias, pseudo-parkinsonism, tardive dyskinesia, and a variant, tardive dystonias.

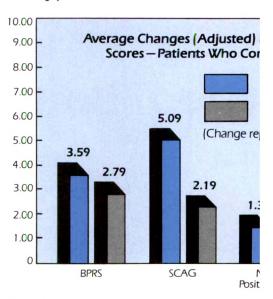
Other adverse reactions reported with Stelazine (trifluoperazine HCI, SK&F) or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

Grand mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities; altered cerebrospinal fluid proteins; cerebral edema; prolongation and intensification of the action of C.N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, constipation, obstipation, adynamicileus, ejaculatory disorders/impotence, prapism, atonic colon, urinary retention, miosis and mydriasis; reactivation of psychotic processes, catatonic-like states, hypotension (sometimes fatall); cardiac arrest; leukopenia, eosinophilia, pancytopenia, agranulocytosis, thrombocytopenic purpura, hemolytic anemia, aplastic anemia, jaundice, biliary stasis, hyperglycemia, hypoglycemia, glycosuna, menstrual irregularities, galactorrhea, gynecomastia, false positive pregnancy tests, photosensitivity, riching, erythema, urticaria, eczema up to exfoliative dermatitis, asthma, laryngeal edema, anaphylactoid reactions, peripheral edema; reversed epinephrine effect, hypergyrexia; mild fever after large I.M. doses; increased appetite; increased weight; a systemic lupus erythematosus-like syndrome; pigmentary retinopathy, with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits; neuroleptic malignant syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible Q and T wave distortions—nave been observed. Temporary nausea, vomiting, dizziness, and temulousness may follow abrupt cessation of high-dose therapy. NOTE: Sudden death in patients taking phenothiazines (apparently due to cardiac arrest or asphyxia due to failure of cough reflex) has been reported.

SK&F CO. Manufactured and distributed by SK&F Co., Cidra, P.R. 00639

New Low-Dose

A six-week, double-blind study compa and efficacy of trifluoperazine with ha management of psychotic symptoms i elderly patients.



The compounds used in this study were haloperidol, USF hydrochloride, SK&F, prepared in #2 opaque capsules. D Smith Kline & French Laboratories. Available on request.

Conclusions:

- Comparable efficacy in reducing syn ses associated with chronic brain sy psychosis in elderly patients
- Comparable type and incidence of a
- No extrapyramidal symptoms (EPS) patients on either drug

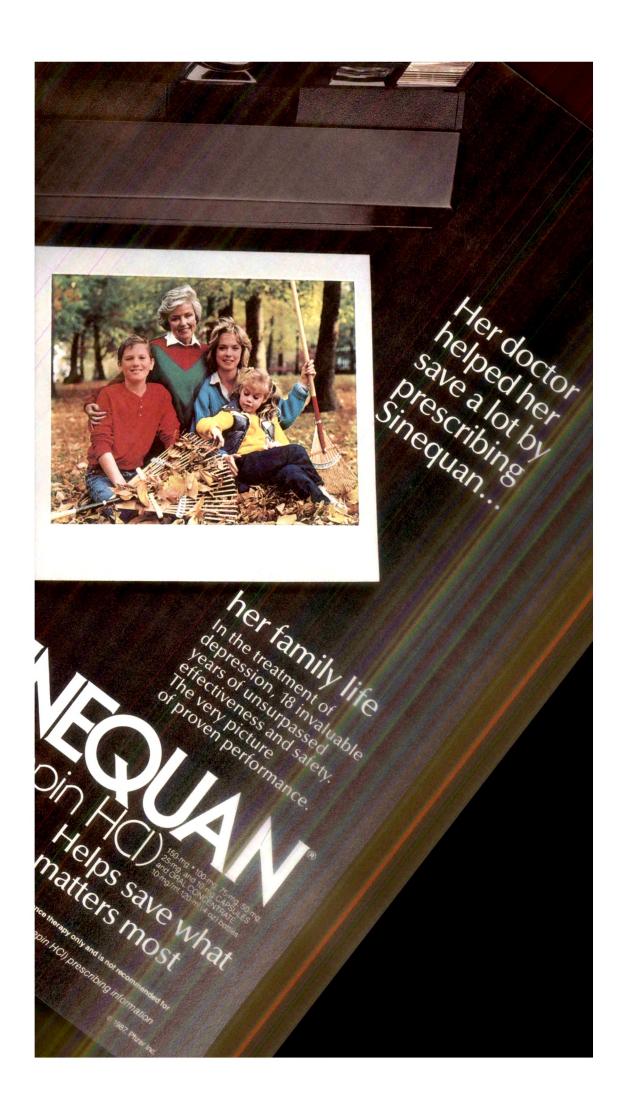
Favorable Safety

Sedation was the most commonly rep No extrapyramidal symptoms (EPS) d€ abnormal involuntary movements pre at baseline showed no increase in sev

Elderly patients should be observed c appear to be more susceptible to hype neuromuscular reactions.

Be sure you're the doctor...always:





- BRIEF SUMMARY
 SINEQUAN® (doxepin HCI) Capsules/Oral Concentrate
 Indications. SINEQUAN is recommended for the treatment of:

 1. Psychoneurotic patients with depression and/or anxiety.

 2. Depression and/or anxiety associated with alcoholism (not to be taken concomitantly with

3. Depression and/or anxiety associated with organic disease (the possibility of drug interaction should be considered if the patient is receiving other drugs concomitantly).

4. Psychotic depressive disorders with associated anxiety including involutional depression and manic-depressive disorders.

The target symptoms of psychoneurosis that respond particularly well to SINEQUAN include anxiety, tension, depression, somatic symptoms and concerns, sleep disturbances, guilt, lack of energy, fear, anytehospion and worry.

Intelliger symposition on payments and concerns, sleep disturbances, guilt, lack of energy, fear, apprehension and worry.

Clinical experience has shown that SINEQUAN is safe and well tolerated even in the elderly patient. Owing to lack of clinical experience in the pediatric population, SINEQUAN is not recommended for use in children under 12 years of age.

Contraindications, SINEQUAN is contraindicated in individuals who have shown hypersens tivity to the drug. Possibility of cross sensitivity with other dibenzoxepines should be kept in mind.

SINEQUAN is contraindicated in patients with glaucoma or a tendency to urnary retention. These disorders should be ruled out, particularly in older patients.

Warnings. The once-a-day dosage regimen of SINEQUAN in patients with intercurrent illness or patients taking other medications should be carefully adjusted. This is especially important in patients receiving other medications with anticholinergic effects.

Usage in Geriatrics: The use of SINEQUAN on a once-a-day dosage regimen in geriatric patients should be adjusted carefully based on the patient's condition.

Usage in Pregnancy: Reproduction studies have been performed in rats, rabbits, monkeys and dogs and there was no evidence of harm to the animal fetus. The relevance to humans is not known. Since there is no experience in pregnant women who have received this drug, safety in pregnancy has not been there is no experience in ordan with respect to the secretion of the drug in human milk and its effect on the nursing infant.

the nursing infant.

Usage In Children: The use of SINEQUAN in children under 12 years of age is not recommended.

USAGE IN CHINITIEN: 1 He USE OF SINCLUAN IN CHINITIEN UNDER 12 YEARS OF AGE IS NOT RECOMMENDED because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO Inhibitors: Therefore, MAO Inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEOUAN. The exact length of time may vary and is dependent upon the particular MAO Inhibitor being used, the length of time it has been administered.

is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Usage with Alcahol: It should be borne in mind that alcohol ingestion may increase the danger inherent in any intentional or unintentional SINEQUAN overdosage. This is especially important in patients who may use alcohol excessively.

Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking the drug. Patients should also be cautioned that their response to alcohol may be potentiated.

**Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy. Prescriptions should be written for the smallest feasible amount.

**Should increased symptoms of psychosis or shift to manic symptomatology occur, it may be necessary to reduce dosage or add a major tranquilizer to the dosage regimen.

Adverse Reactions. NOTE: Some of the adverse reactions noted below have not been specifically reported with SINEQUAN use. However, due to the close pharmacological similarities among the tricyclics, the reactions should be considered when prescribing SINEQUAN.

Anichalinergic Effects: Dry mouth, blurred vision, constitution, and urinary retention have been reported. If they do not subside with continued therapy, or become severe, it may be necessary to reduce the dosage.

required. It they do not substantial control to the control to the

Cardiovascular: Cardiovascular effects including hypotension and tachycardia have been reported occasionally.

Allergic: Skin rash, edema, photosensitization, and pruritus have occasionally occurred Hematologic: Eosinophilia has been reported in a few patients. There have been occasional reports of bone marrow depression manifesting as agranulocytosis, leukopenia, thrombocytopenia, and purpus. Gastrointestinal: Nausea, vormiting, indigestion, taste disturbances, diarribea, anorexia and apphithous stomatitis have been reported. (See anticholinergic effects.)

Endocrine: Raised or lowered libido, testicular swelling, gynecomastia in males, enlargement of breasts and galactorrhea in the female, raising or lowering of blood sugar levels, and syndrome of inappropriate antidiuretic hormone have been reported with tricyclic administration.

Other: Dizziness, tinnitus, weight gain, sweating, chilis, fatigue, weakness, flushing, jaundice, alopecia, and headache have been occasionally observed as adverse effects.

Withdrawal Symptoms: The possibility of development of withdrawal symptoms upon abrupt cessation of treatment after prolonged SINEQUAN (doxepin HCI) administration should be borne in mind. These are not indicative of addiction and gradual withdrawal of medication should not cause these symptoms.

symptoms.

Dosage and Administration. For most patients with illness of mild to moderate severity, a starting daily

Dosage and Administration. For most patients with illness of mild to moderate severity, a starting daily

Dosage and Administration. For most patients with illness of mild to moderate severity, a starting daily dose of 75 mg is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg/day to 150 mg/day. In more severely ill patients higher doses may be required with subsequent gradual increase to 300 mg/day, in patients with nery mild symptomatology or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg/day. The total daily dosage of SINEQUAN may be given on a divided or once-a-day dosage schedule. If the once-a-day schedule is employed the maximum recommended dose is 150 mg/day. This dose may be given at bedtime. The 150 mg capsule strength is intended for maintenance therapy only and is not recommended for intilation of treatment.

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not be evident for two to three weeks.

Overdosage
A. Signs and Symptoms
1. Mild: Drowsiness, stupor, blurred vision, excessive dryness of mouth.
2. Severe: Respiratory depression, hypotension, coma, convulsions, cardiac arrhythmias and

tachycarolas.

Also: urinary retention (bladder atony), decreased gastrointestinal motility (paralytic ileus), hyperthermia (or hypothermia), hypertension, dilated pupils, hyperactive reflexes.

B. Management and Treatment

hermia (or hypothermia), hypertension, dilated pupils, nyperactive reneads.

B. Management and Treatment

1. Mild: Observation and supportive therapy is all that is usually necessary.

2. Severe: Medical management of severe SINEQUAN overdosage consists of aggressive supportive therapy. If the patient is conscious, gastric lavage, with appropriate precautions to prevent pulmonary aspiration, should be performed even though SINEQUAN is rapidly absorbed. The use of activated charcoal has been recommended, as has been continuous gastric lavage with saline for 24 hours or more. An adequate airway should be established in comatose patients and assisted ventilation used if necessary. EKG monitoring may be required for several days, since relapse after apparent recovery has been reported, Arrityhmias should be treated with the appropriate antiarrityhmiric agent. It has been reported that many of the cardiovascular and CNS symptoms of tricyclic antidepressant poisoning in adults may be reversed by the slow intravenous administration of 1 mg to 3 mg of physostigmine acticylate. Because physostigmine is rapidly metabolized, the dosage should be repeated as required. Convulsions may respond to standard anticonvulsant therapy, however, barbiturates may potentiate any respiratory depression. Diapsis and forced diuresis generally are not of value in the management of overdosage due to high tissue and protein binding of SINEQUAN.

More detailed professional information available on request.



INDEX TO ADVERTISTERS

OCTOBER 1987

The publication of an advertisement in this journal does not imply endorsement of the product or service by the American Psychiatric Association.

BIOLOGIC SYSTEMS INC
BOERINGER INGELHEIM PHARMACEUTICALS INC. Serentil

CHARTER MEDICAL CORP.......A24-A25

DORSEY PHARMACEUTICALS Mellaril......A42

Pamelor	7
DUPONT PHARMACEUTICALS	

				4.40
EMPLOYMENT OPPORTUNITIES				
	A55,	A56,	A58,	A59

INCTEDITE OF LIMINO
INSTITUTE OF LIVING

McNEIL PHARMACEUTICALS	
Haldol	
Haldol Decanoate	A26–A28

MECTA CORPORATION	20
MEETINGS AND CONFERENCES	55

MERRELL DOW PHARMACEUTICALS INC	
Norpramin	A9–A12

PDLAA14

NICOLET......A60

PUBLISHING	COMPANIES	***************************************	A13,	A54
	001.1111111		,	

QUANTIFIED SIGNAL II	MAGING 1	INCA23
----------------------	----------	--------

ROCHE LABORATORIES ValiumA15

ROERIG Navane.......A6–A8

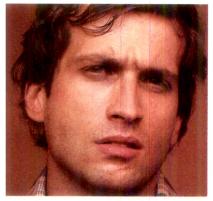
Sinequan......A63-A64

SMITH, KLINE AND FRENCH LABORATORIES

E R SQUIBB & S	ONS
Prolixin	A45–A49

THE UPJOHN COMPANY	
Halcion	A43–A44
Xanax	A21–A22

WYETHI	ABORATORIES	
		101 101
Ativan		 A31–A34



schizophrenic patients Easily recognized color-coded tablets and tablet design

 Concentrate dropper calibrated in milligrams to facilitate dosage adjustment, as low as 1/2 mg.

Make sure they receive





For your









Haldo Haldol

and not a substitute

to following is a brief summary only. Before prescribing, see complete prescribing information in HALDOL and LDOL Decanoate product labeling.

Intrindications: Since the pharmacologic and clinical actions of HALDOL (haloperidol) Decanoate are attributed HALDOL. Some sections have been modified to reflect the prolonged action of HALDOL becanoate.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any use and in individuals who are hypersensitive to this drug or have Parkinson's disease.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any use and in individuals who are hypersensitive to this drug or have Parkinson's disease.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any use and in individuals who are hypersensitive to this drug or have Parkinson's disease.

HALDOL is contraindicated in severe toxic central nervous operations of products of the disease of the difference of the individuals who are hypersensitive to this drug. Although the prevalence of the difference estimates to predict, at the inception of antipsychotic drugs. Although the prevalence of the difference estimates to predict, at the inception of antipsychotic treatment, which patients and kiely to develop explorements. Whether antipsychotic drugs ministered to the patient increase as the duration of treatment and the total cumulative dose of antipsychotic drugs ministered to the patient increase. However, the syndrome can develop, although much less commonly, after atively brief treatment periods at low doses. There is no known treatment for established cases of tardive skinesia, although the syndrome may remit, partially or completely, if antipsychotic treatment is withdrawn. hipsychotic treatment periods at low doses. There is no known treatment of restablished cases of tardive skinesia, although the syndrome may remit, partially be restabled to the syndrome treatment of the predict of th

ecautions: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of insient hypotension and/or precipitation of anginal pain (if a vasopressor is required, epinephrine should not be de since HALDOL may blook its vasopressor activity and paradoxical further lowering of blood pressure may cur; metaraminol, phenylephrine or norepinephrine should be used); (2) receiving anticonvulsant medications, the a history of seizures, or with EEG abnormalities, because HALDOL may lower the convulsive threshold. If dicated, adequate anticonvulsant therapy should be concomitantly maintained, (3) with known allergies or a story of allergic reactions to drugs; (4) receiving anticoagulants, since an isolated instance of interference curred with the effects of one anticoagulant (phenindione). Concomitant antiparkinson medication, allergies or a scontinued simultaneously, extrapyramidal symptoms may occur. Intraocular pressure may increase when thoblinergic drugs, including antiparkinson drugs, are administered concomitantly with HALDOL. When ILDOL is used for mania in bipolar disorders, there may be a rapid mood swing to depression. Severe untoxicity may occur in patients with thyrotoxicosis receiving antipsychotic medication, including HALDOL. The 1, 5 and 10 mg HALDOL tablets contain FD&C Yellow No. 5 (tartrazine) which may cause allergic-type actions (including bronchial asthma) in certain susceptible individuals, especially in those who have aspirin persensitivity. ns: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of

actions (including bronchial asthma) in certain susceptible individuals, especially in those who have aspirin persensitivity.

Information for Patients: Mental and/or physical abilities required for hazardous tasks or driving may be paired. Alcohol should be avoided due to possible additive effects and hypotension.

Drug Interactions: Patients receiving lithium plus halloperidol should be monitored closely for early evidence of urological toxicity and treatment discontinued promptly if such signs appear. As with other antipsychotic ents, it should be noted that HALDOL may be capable of potentiating CNS depressants such as anesthetics, itaes, and alcohol.

Carcinogenesis, Mutagenesis and Impairment of Fertility: No mutagenic potential of haloperidol decanoate is found in the Ames Salmonella microsomal activation assay.

Carcinogenicity studies using oral haloperidol were conducted in Wistar rats (dosed at up to 5 mg/kg daily for months) and in Albino Swiss mice (dosed at up to 5 mg/kg daily for 18 months). In the rat study survival was sist han optimal in all dose groups, reducing the number of rats at risk for developing tumors. However, aithough elatively greater number of rats survived to the end of the study in high dose male and female groups, these imals did not have a greater incidence of tumors than control animals. Therefore, although not optimal, this

study does suggest the absence of a haloperidol related increase in the incidence of neoplasa in rats at dones up to 20 times the usual daily human dose for chronic or resistant patients. In fernale mice at 5 and 20 times the highest initial daily dose for chronic or resistant patients, there was a statistically significant increase in mammary gland neoplasia and total tumor incidence, at 20 times the same daily dose there was a statistically significant increase in pitulary gland neoplasia. In male mice, no statistically significant differences in incidences of total tumors or specific fumor types were noted.

Antipsychotic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are profactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhae, amenorrhae, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of these drugs and mammary tumorigenesis: the available evidence is considered too limited to be conclusive at this time.

Usage in Pregnancy.Pregnancy Category C. Safe use in pregnancy or in women likely to become pregnant has not been established; use only if benefit clearly justifies potential hazards to the fetus.

**Nursing Mothers: Infants should not be nursed during drug treatment.

Pediatric Use:Controlled trials to establish the safety and effectiveness of intramuscular administration in children have not been conducted.

**Adverse Reactions: Adverse reactions following the administration of HALDOL. (halopendol) Decanoate are those of HALDOL. Society and the prognance is a supplication of the present of the presence of the supplications have been reported

including hallucinations, and catatonic-like behavioral states which may be responsive to drug withdrawal and/or treatment with anticholinergic drugs.

Body as a Whole: Neuroleptic malignant syndrome (NMS), hyperpyrexia and heat stroke have been reported with HALDOL. (See WARNINGS for further information concerning NMS). Cardiovascular Effects. Tachycardia. hypotension, hypertension and ECG changes. Hematologic Effects: Reports of mild, usually transient leukopenia and leukocytosis, minimal decreases in red blood cell counts, anemia, or a tendency toward lymphomonocytosis, agranulocytosis rarely reported and only in association with other medication. Liver Effects. Impaired liver function and/or jaundice. Dermatologic Reactions: Maculopapular and acnetiorm reactions, isolated cases of photosensitivity, loss of hair. Endocrine Disorders: Laction, breast engorgement, mastalgia, menstrual irregularities, gynecomastia, impotence, increased libido, hyperglycemia, hypoglycemia and hyponatremia. Gastrointestinal Effects: Anorexia, constipation, diarrhea, hypersalivation, dyspepsia, nausea and vomiting. Autonomic Reactions: Dry mouth, blurred vision, urinary retention, diaphoresis, and priapism. Respiratory Effects: Laryngospasm, bronchospasm and increased depth of respiration. Special Senses: Cataracts, retinopathy and visual disturbances. Other. Cases of sudden and unexpected death have been reported in association with the administration of HALDOL. The nature of the evidence makes it impossible to determine definitively what role, if any, HALDOL played in the outcome of the reported cases. The possibility that HALDOL caused death rannot, of course, be excluded, but it is to be kept in mind that sudden and unexpected death may occur in psychotic gatents when they go untreated or when they are treated with other antipsychotic drugs.

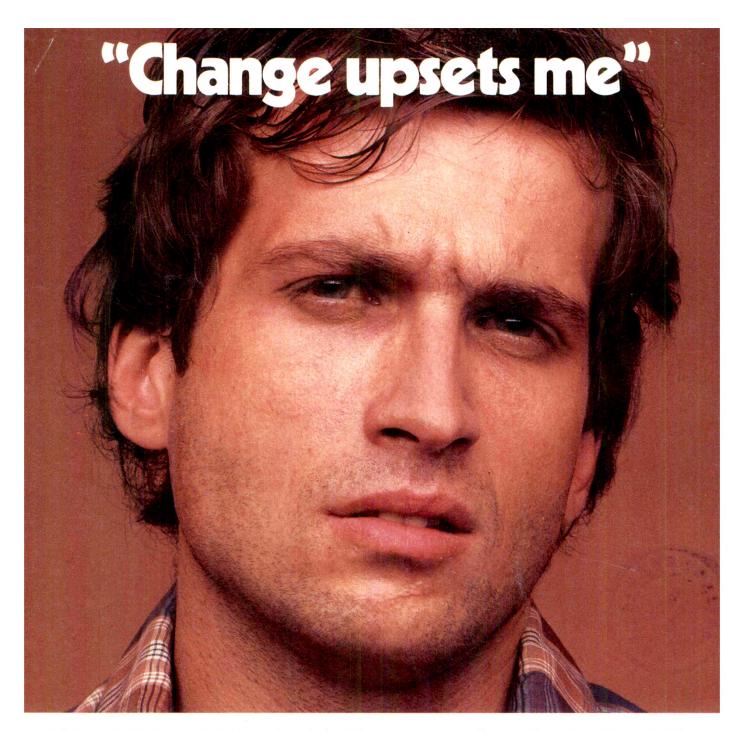
MPORTANT: Full directions for use should be read before HALDOL or HALDOL Decanada is administered or prescribed.

prescribed.

For information on symptoms and treatment of overdosage, see full prescribing information.

The short-acting HALDOL injectable form is intended only for acutely agitated psychotic patients with moderately severe to very severe symptoms.





Most patients with psychotic symptoms need a quiet, undemanding life that provides refuge from a confusing and overwhelming world."

You can help avoid one potentially stressful change by making sure your patients receive the unique HALDOL Tablet they can recognize.

















Patient portrayed by professional model.

Please see brief summary of Prescribing Information on the preceding page

© McNEILAB, INC 1986



¹ Grinspoon L (ed). Care and treatment of schizoprenia—Part II, in The Harvard Medical School Mental Health Letter 1986; 3(1):1.

THE AMERICAN JOURNAL OF PSYCHIATRY

Volume 144, Number 11

November 1987

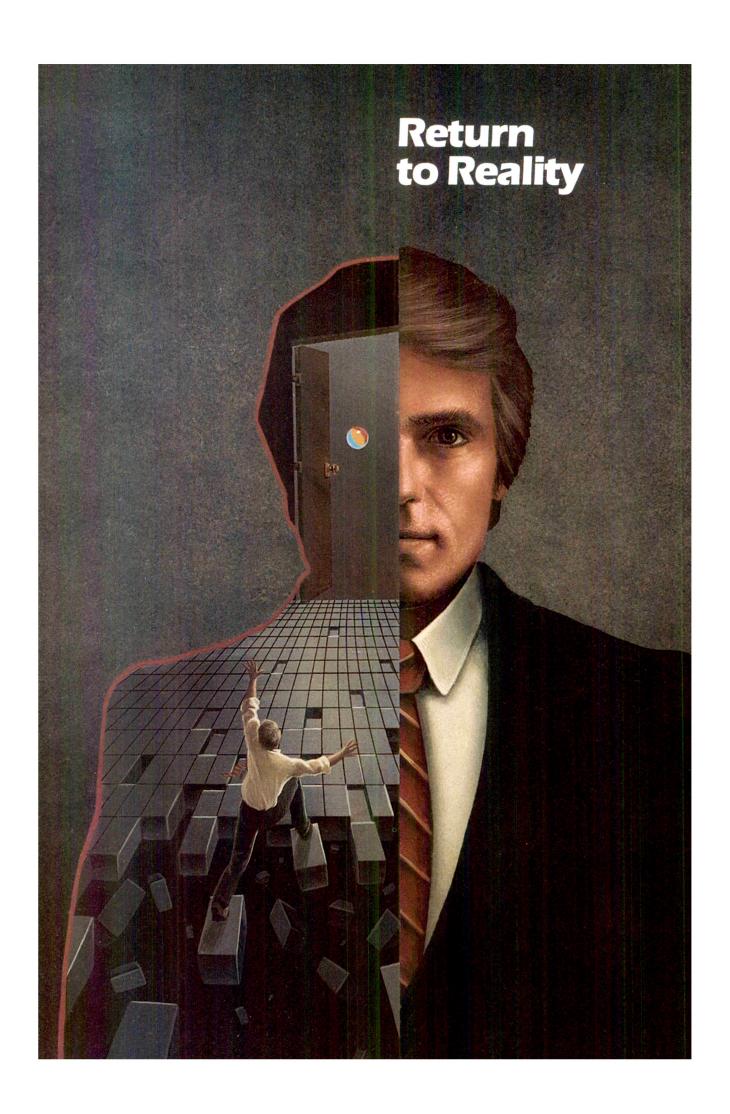
In this issue:

Can Antidepressants Cause Mania and Worsen the Course of Affective Illness?

By Thomas A. Wehr and Frederick K. Goodwin

Psychiatry and the Nursing Home
By Soo Borson, Benjamin Liptzin, James Nininger, et al.

Official Journal of the American Psychiatric Association



Stelazine®

trifluoperazine HCl Tablets: 1, 2, 5 and 10 mg Concentrate: 10 mg/ml

Be sure you're the doctor... always write Stelazine® Dispense as written.

> Hec 6.4.88

Helps Put the Chronic Schizophrenic Back in Touch

□ Effectively controls psychotic target symptoms
☐ Apparently activates withdrawn, apathetic or detached patients
☐ Seldom causes excessive sedation
\square Demonstrates a low risk of anticholinergic effects and hypotension

'Stelazine' shares the increased risk of extrapyramidal symptoms associated with all high-potency neuroleptics. However, when encountered, these symptoms are generally readily controlled.

☐ Offers a convenient, economical b.i.d. dosage

Stelazine®

brand of trifluoperazine hydrochloride

Before prescribing, see complete prescribing information in SK&F Co. literature or $\underline{PDR}.$ The following is a brief summary **Contraindications:** Comatose or greatly depressed states due to C.N.S. depressants, blood dyscrasias; bone marrow depression; liver damage.

Warnings: Tardive dyskinesia (TD) may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively brief treatment at low doses. There is no known treatment for TD, although it may remit if neuroleptics are withdrawn. Neuroleptic treatment may suppress neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. If signs and symptoms of TD appear, discontinuation of neuroleptics should be considered. [See PBPCALITONS I PRECAUTIONS.)

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symp tom complex, has been reported in association with antipsychotic drugs. Clinical manifestations include: Hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability.

The management of NMS should include 1] immediate discontinua-tion of antipsychotic drugs and other drugs not essential to concur-rent therapy. 2] intensive symptomatic treatment and medical monitoring, and 3] treatment, if available, of any concomitant serious medical problems.

Serious medical problems. Stelazine' Concentrate contains sodium bisulfite, which may cause allergic-type reactions including anaphylactic symptoms or asth-matic episodes in certain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and prob-ably low and is seen more frequently in asthmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive [e.g., have had blood dyscrasias, jaundice] to any phenothiazine. Caution patients about activities requiring alertness [e.g., operating vehicles or machinery], especially during the first few days' therapy. Additive depressant effect is possible with other C.N.S. depressants, including alcohol. Do not use in pregnancy except when essential and

potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuro-leptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is contemplated.

when chronic use is contemplated. Use cautiously in angina. Avoid high doses and parenteral use when cardiovascular system is impaired since hypotension has occurred. Antiemetic effect may mask the signs of overdosage of other drugs or obscure diagnosis and treatment of certain physical disorders. Prolonged use of high doses may result in cumulative effects with severe C.N.S. or vasomotor symptoms. If retinal changes occur, discontinue drug. Agranulocytosis, thrombocytopenia, pancytopenia, anemia, cholestatic jaundice, liver damage have been reported. Use cautiously in patients with glaucoma. glaucoma.

glaucoma.

Patients with a history of long-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent in vitro, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

cautiously in persons who will be exposed to extreme heat. Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenergic blockade. Concomitant use of phenothiazines with propranolol increases plasma levels of both drugs. Concurrent use of phenothiazines may counteract antihypertensive effects of guanethidine and related compounds. Thiazide diuretics may accentuate the orthostaic hypotrension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytoin toxicity; dosage adjustments of anticonvulsants may be necessary. If neuronuscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive "Stelazine" 48 hours before or 24 hours after myelography with the contrast medium metrizamide. The presence of phenothizaines may produce false positive phenylketonural [PKU] test results. may produce false positive phenylketonuria (PKU) test results.

Adverse Reactions: Drowsiness, dizziness, skin reactions, rash. dry mouth, insomnia, amenorrhea, fatigue, muscular weakness, anorexia, lactation, blurred vision. Neuromuscular (extrapyramida reactions: motor restlessness, dystonias, pseudo-parkinsonism, tar dive dyskinesia, and a variant, tardive dystonia.

Other adverse reactions reported with Stelazine [trifluoper-azine HCI, SK&FJ or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders [e.g., mitral insufficiency or pheochromocytoma]

effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

Grand mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities; altered cerebrospinal fluid proteins; cerebral edema; prolongation and intensification of the action of C.N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, constipation, obstipation, adynamic illeus, ejaculatory disorders/impotence, prapism, atonic colon, urinary retention, miosis and mydriasis; reactivation of psychotic processes, catatonic-like states, hypotension (sometimes fatal); cardiac arrest; leukopenia, eosinophilia, pancytopenia, agranulocytosis, thrombocytopenia purpura, hemolytic anemia, aplastic anemia, ajaundice, biliary stasis, hypoetlycemia, hypoglycemia, glycosuria, menstrual irregularities; galactorrhea, gynecomastia, false positive pregnancy tests, photosensitivity, itching, erythema, urticana, eczema up to exfoliative dermatitis, asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions, peripheral edema, reversed epinephrine effect; hyperpyrevia; mild fever after large I.M. doses; increased appetite; increased weight; a systemic lupus erythematosus-like syndrome; pigmentary retinopathy, with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits; neuroleptic malignant syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible Q and T wave distortions—have been observed. Temporary nausea, vomiting, dizziness, and tremulousness may follow abrupt cessation of high-dose therapy. NOTE: Sudden death in patients taking phenothiazines (gaparently due to cardiac arrest or asphyxia due to failure of cough reflex) has been reported.

Supplied: Tablets, 1 mg., 2 mg., 5 mg., and 10 mg, in bottles of 100 and 1000; in Single Unit Fackaese of 100 lintended for institutional

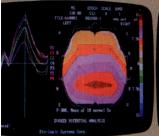
Supplied: Tablets, 1 mg., 2 mg., 5 mg. and 10 mg., in bottles of 100 and 1000; in Single Unit Packages of 100 (intended for institutional use only); Injection, 2 mg./mL.; and Concentrate, 10 mg./mL.

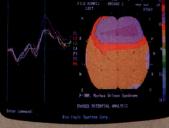
SK&F CO.

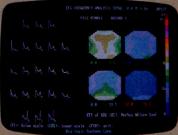
It you are going to be successful in topographic brain mapping, you need more than promises.

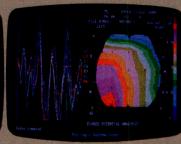
e want to explain why our responsible approach to topographic brain mapping is critical to your success.

Anyone can make claims. We can demonstrate the system and kind of responsibility it takes to become the world leader in topographic brain mapping.









mean of 10 normal subjects

P-300 of patient with Morbus Wilson Syndrome

FFT of EEG (EC), Morbus Wilson Syndrome

P-300 of patient with Alzheimer's Disease

Responsibility

If you want to acquire topographic brain mapping data that will be clinically accepted by your colleagues, you must have a system provided by a company with a proven reputation for responsibility. We will discuss the clinical applications with you which are supported by appropriate research and are available to assist you with diagnosis and treatment. We will talk to you honestly about the ways the BRAIN ATLAS® can assist you in monitoring psychotropic drugs and provide you valuable information in cases such as schizophrenia, dementia, depression, organic brain dysfunction and alzheimer's disease. At Bio-logic, we always remember that you are the Doctor with the responsibility for diagnosis of patients. Our responsibility is to provide quality systems which will assist you in that diagnosis.

Normative Data

Before we introduced the first Brain Atlas in April 1984, we had a program in place for the collection and screening of normative data. We will supply you with a quality normative data base which is continuously expanding in number of cases, types of tests and subgroups. Our unique program produces normative data which have been collected in multiple sites according to stringent protocols and anonymously scrutinized by an independent medical review board outside the company. We also provide you with the capability to create your own normative data base. At Bio-logic, our Normative Data Base is an open book. We will share the number of cases we have in each category and explain our data collection/data evaluation process in detail.

Ease of Use

The Brain Atlas will deliver the full power and flexibility of a computer. Powerful functions are reduced to a few keystrokes when you use the easy-to-follow menus and help screens to guide you to the level of sophistication you require in testing. Because the system is IBM PC/AT compatible, we can even incorporate commercially available programs to make your work faster and easier.

Affordable and Expandable

The Brain Atlas series offers you a complete range in price and capability with the BRAIN

ATLAS EEG MAPPER, BRAIN ATLAS I, BRAIN ATLAS II, BRAIN ATLAS II, BRAIN ATLAS III and the BRAIN ATLAS III PLUS. The BRAIN ATLAS III and the BRAIN ATLAS III PLUS are totally self contained systems and need not be interfaced to an EEG machine. All the systems in the series have options available which allow you to tailor the system to fit your specific requirements and budget. Each system is designed to be upgraded as your needs change or as new capabilities are introduced.

Customer Support, Training and User Group

Bio-logic maintains and provides a complete program for unsurpassed customer support and training. Whether you are working with the customer support and applications staff members or attending our customer training courses and seminars, you will be interacting with professionals who are dedicated to your satisfaction. The unique user group which is supported by Bio-logic allows you the opportunity to exchange information with your colleagues worldwide who are dedicated to quality topographic brain mapping.



Corporate Headquarters One Bio-logic Plaza

Mundelein, IL 60060

Call toll free at 800-323-8326 (Illinois call collect 312-949-5200) Telex: 650-1733095 MCI FAX: (312) 949-8615

Europe/Middle East

Dickenson House, Albion Street, Chipping Norton, Oxfordshire, LIK 0X7 5B.I Telephone 44 608 41 981 Telex: Ref. EEG001, 265871 MONREF G FAX: 44 608 41887



THE AMERICAN JOURNAL OF PSYCHIATRY

EDITOR John C. Nemiah, M.D.

DEPUTY EDITOR Morris A. Lipton, Ph.D., M.D.

BOOK FORUM EDITOR Nancy C. Andreasen, M.D., Ph.D.

EDITORIAL STAFF

Managing Editor Melanie Miller

Assistant Managing Editor Linda A. Loy

Senior Assistant Editors Marianne K. Guerra Laura M. Little Jane Weaver

Assistant Editors Marjorie M. Henry Beverly M. Sullivan

Administrative Assistant Pamela Rich

Editorial Secretaries Donna A. Coleman Barbara J. LeMoine

Art Services John P. Halford

ASSOCIATE EDITORS

Ross J. Baldessarini, M.D. Elissa P. Benedek, M.D. Philip A. Berger, M.D. Jonathan F. Borus, M.D. Kenneth L. Davis, M.D. Lewis L. Judd, M.D. Toksoz Byram Karasu, M.D. Herbert Y. Meltzer, M.D. Judith L. Rapoport, M.D. Loren H. Roth, M.D., M.P.H. Lorraine D. Siggins, M.D. Charles E. Wells, M.D. Charles B. Wilkinson, M.D.

STATISTICAL EDITORS John J. Bartko, Ph.D. Lee Gurel, Ph.D.

FORMER EDITORS

Amariah Brigham, M.D. 1844-1849 T. Romeyn Beck, M.D. 1849-1854 John P. Gray, M.D. 1854-1886 G. Alder Blumer, M.D. 1886-1894 Richard Dewey, M.D. 1894-1897 Henry M. Hurd, M.D. 1897-1904 Edward N. Brush, M.D. 1904-1931 Clarence B. Farrar, M.D. 1931-1965

Francis J. Braceland, M.D.

1965-1978

The American Journal of Psychiatry, ISSN 0002-953X, is published monthly by the American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005. Subscriptions: U.S. \$50.00 per year, Canada and foreign \$65.00; single issues: U.S. \$7.00, Canada and foreign \$8.00.

Business communications, changes of address, and questions about subscriptions from APA members should be directed to the Division of Member Services: (202) 682-6090. Communications from nonmember subscribers should be directed to the Circulation Department: (202) 682-6158. Authors who wish to contact the *Journal* editorial office should call (202) 682-6020.

Journal editorial office should call (202) 682-6020.

Business Management: Nancy Frey, Director, Periodicals Services; Laura G. Abedi, Advertising Production Manager: (202) 682-6154; Beth Prester, Director, Circulation; Karen Loper, Promotion Manager; Jackie Coleman, Fulfillment Manager.

Advertising Sales: Raymond J. Purkis, 2444 Morris Avenue, Union, NJ 07083; (201) 964-3100.

Type set by Byrd PrePress, 5408 Port Royal Road, Springfield, VA 22151, Printed by Dartmouth Printing Company, 69 Lyme Road.

22151. Printed by Dartmouth Printing Company, 69 Lyme Road, Hanover, NH 03755.

Second-class postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to Circulation Department, American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005. Indexed in Abstracts for Social Workers, Biological Abstracts, Chemical Abstracts, Chicago Psychoanalytic Literature Index, Cumulative Index to Nursing Literature, Excerpta Medica, Hospital Literature Index, Index Medicus, International Nursing Index, Nutrition Abstracts, Psychological Abstracts, Science Citation Index, and Social Sciences Index.

The American Psychiatric Association does not hold itself responsible for statements made in its publications by contributors or advertisers. Unless so stated, material in the Journal does not reflect the endorsement, official attitude, or position of the American Psychiatric Association or of the *Journal's* Editorial Board.

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by APA for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$00.75 per copy is paid directly to CCC, 21 Congress St., Salem, MA 01970. 0002-953X/87/\$00.75.

This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. APA does not require that permission be obtained for the photocopying of isolated articles for nonprofit classroom or library reserve use; all fees associated with such permission are waived.
Copyright © 1987 American Psychiatric Association.

THE AMERICAN JOURNAL OF PSYCHIATRY

Volume 144, Number 11 November 1987

SPECIAL ARTICLES	1403	Can Antidepressants Cause Mania and Worsen the Course of Affective Illness? Thomas A. Wehr and Frederick K. Goodwin
	1412	Psychiatry and the Nursing Home Soo Borson, Benjamin Liptzin, James Nininger, and Peter Rabins
REGULAR ARTICLES	1419	Controllable and Uncontrollable Stress in Humans: Alterations in Mood and Neuroendocrine and Psychophysiological Function Alan Breier, Margot Albus, David Pickar, Theodore P. Zahn, Owen M. Wolkowitz, and Steven M. Paul
	1426	Childhood Sexual and Physical Abuse as Factors in Adult Psychiatric Illness Jeffrey B. Bryer, Bernadette A. Nelson, Jean Baker Miller, and Pamela A. Krol
	1431	Abused to Abuser: Antecedents of Socially Deviant Behaviors Ann W. Burgess, Carol R. Hartman, and Arlene McCormack
	1437	Conceptual and Methodological Issues in the Comparison of Inpatient Psychiatric Facilities Nancy A. Goodban, Paul B. Lieberman, Michael A. Levine, Boris M. Astrachan, and Vincent Cocilovo
	1443	Long-Term Hospital Treatment of Borderline Patients: A Descriptive Outcome Study Lyle Tucker, Stephen F. Bauer, Susan Wagner, Dean Harlam, and Ilene Sher
	1449	Effects of Electrode Placement on the Efficacy of Titrated, Low-Dose ECT Harold A. Sackeim, Paolo Decina, Maureen Kanzler, Barbara Kerr, and Sidney Malitz
	1456	Perceptual and Cognitive Abnormalities in Bulimia Pauline S. Powers, Richard G. Schulman, Alice A. Gleghorn, and Mark E. Prange
COMMENTARY	1461	The Evolving Subspecialization of Psychiatry: Implications for the Profession Joel Yager and Donald G. Langsley
BRIEF COMMUNICATIONS	1466	A Comparative Trial of Pharmacologic Strategies in Schizophrenia William T. Carpenter, Jr., Douglas W. Heinrichs, and Thomas E. Hanlon
	1471	Progress in the Classification of Functional Psychoses William Coryell and Mark Zimmerman
	1474	Reports of Childhood Incest and Current Behavior of Chronically Hospitalized Psychotic Women James C. Beck and Bessel van der Kolk
	1477	A Comparison of the Diagnostic Interview Schedule and Clinical Diagnosis Harold P. Erdman, Marjorie H. Klein, John H. Greist, Sandra M. Bass, Jane K. Bires, and Paula E. Machtinger

1480 Platelet MAO Activity in Geriatric Patients With Depression and Dementia George S. Alexopoulos, Robert C. Young, Kenneth W. Lieberman, and Charles A. Shamoian The Use of DSM-III Axis III in Recording Physical Illness in Psychiatric Robert Maricle, Paul Leung, and Joseph D. Bloom **Patients** Effects of Sugar and Aspartame on Aggression and Activity in Children Markus J.P. Kruesi, Judith L. Rapoport, E. Mark Cummings, Carol J. Berg, Deborah R. Ismond, Martine Flament, Marian Yarrow, and Carolyn Zahn-Waxler Relationship of Serum TSH Concentration and Antithyroid Antibodies to 1491 John J. Haggerty, Diagnosis and DST Response in Psychiatric Inpatients Jr., Jeffrey S. Simon, Dwight L. Evans, and Charles B. Nemeroff Tardive Dyskinesia and Neuroleptic-Induced Parkinsonism in Japan Renee L. Binder, Hajime Kazamatsuri, Tsuyoshi Nishimura, and Dale E. McNiel Follow-Up Study of 11 Patients With Potentially Reversible Tardive Dyskinesia Gohei Yagi and Hitoshi Itoh 1499 1510 Correction: Bev L. True et al.: "Profound Hypoglycemia With the Addition of a 1521 Tricyclic Antidepressant to Maintenance Sulfonylurea Therapy" (1987; 144:1220-1221)

OFFICIAL ACTIONS

CLINICAL AND

BOOK FORUM

TO THE EDITOR

LETTERS

RESEARCH REPORTS

1522 Guidelines on Confidentiality

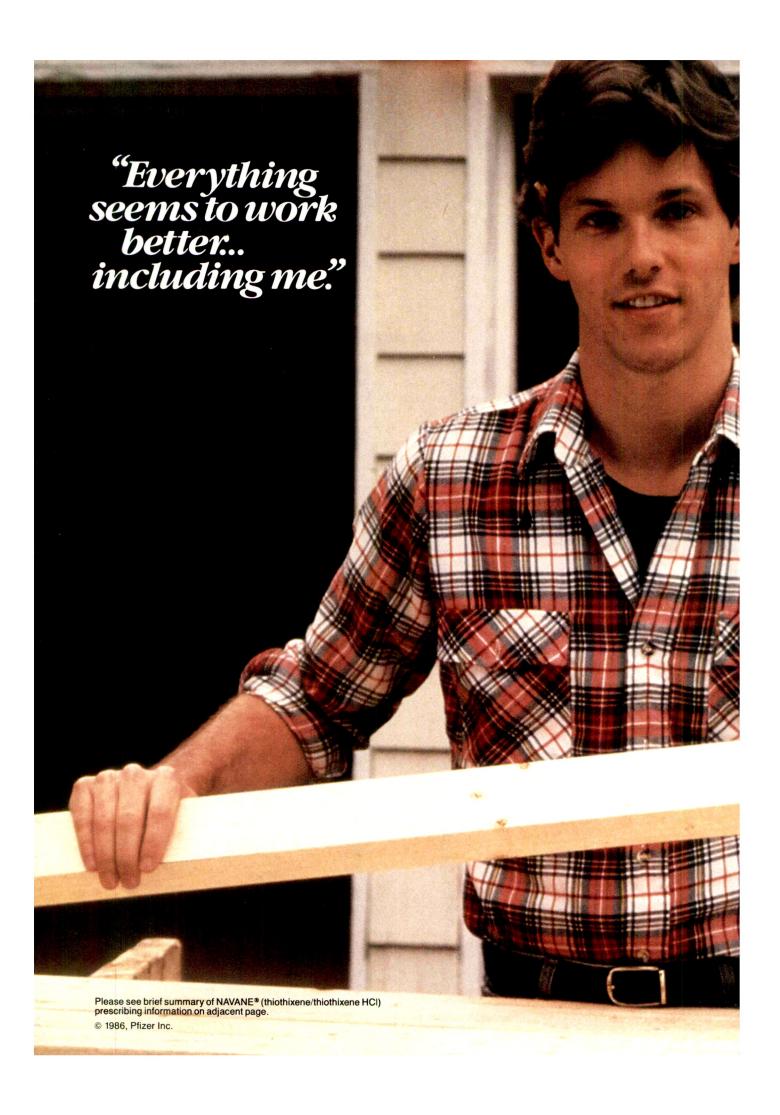
OTHER

- 1425 Deceased Members of the American Psychiatric Association
- A24 Books Received
- A26 Calendar
- A28 Officers of the American Psychiatric Association
- A40 Index to Advertisers
- A50 British Journal of Psychiatry Contents

New Statistical Peer Review Policy

The Editor is pleased to announce the appointment of John J. Bartko, Ph.D., and Lee Gurel, Ph.D., as Statistical Editors of the *American Journal of Psychiatry*.

Effective September 1, 1987, manuscripts submitted to the *Journal* for consideration for publication will, at the direction of the Statistical Editors, receive peer review for statistical content *in addition to* the *Journal*'s regular peer review.





Navane[®]

(thiothixene) (thiothixene HCI)

It feels good to feel useful again

Intramuscular 2 mg/ml 5 mg/ml



5 mg/ml

References: 1. Bressler B. Friedel RO: A comparison between chlorpromazine and thiothixene in a Veterans Administration hospital population. *Psychosomatics* 1971;12:275-277. 2. DiMascio A, Demirgian E: Study of the activating properties of thiothixene. *Psychosomatics* 1972;13:105-108. 3. DiMascio A, Demirgian E: Study of the activating properties of thiothixene. *Psychosomatics* 1972;13:105-108. 3. DiMascio A, Demirgian E: Sub of training in the rehabilitation of the chronic schizophrenic. Presented as a Scientific Exhibit at The American Psychiatric Association. Washington, DC. May 3-6, 1971. 4. Goldstein B, Weiner D, Banas F: Clinical evaluation of thiothixene in chronic ambulatory schizophrenic patients, in Lehmann HE, Ban TA (eds): *The Thioxanthenes: Modern Problems of Pharmacopsychiatry*. Basel, Switzerland, S. Karger, 1969, vol 2, pp 45-52. 5. Dillenkofter RL, Gallant DM, George RB, et al: Electrocardiographic evaluation of schizophrenic patients: A double-blind comparison. Presented as a Scientific Exhibit at The 125th Annual Meeting of the American Psychiatric Association, Dallas, May 1-4, 1972. 6. Data available on request from Roerig.

RRIEF SUMMARY OF PRESCRIBING INFORMATION
Navane* (thiothixene) Capsules: 1 mg, 2 mg, 5 mg, 10 mg, 20 mg
(thiothixene hydrochloride) Concentrate: 5 mg/ml, Intramuscular: 2 mg/ml, 5 mg/ml
Indications: Navane is effective in the management of manifestations of psychotic disorders. Navane has not been evaluated in the management of behavioral complications in patients with mental retardation.
Contraindications: Contraindicated in patients with circulatory collapse, comatose states, central nervous system depression due to any cause, and blood dyscrasias. Contraindicated in individuals who have shown hypersensitivity to the drug, It is not known whether there is a cross-sensitivity between the thioxanthenes and the phenothiazine derivatives, but the possibility should be considered.
Warnings: Tardive Dyskinesia—Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic trament, which patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses.

brief treatment periods at low doses.

brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness that, 1) is known to respond to neuroleptic drugs, and, 2) for whom alternative, equally effective, but potentially less harmfull treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically.

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation syndrome.

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

(For further information about the description of tardive dyskinesia and its clinical detection, please refer to Information for Patients in the Precautions section, and to the Adverse Reactions section. Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS)—A potentially fatal symptom complex sometimes of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis, and cardiac dysrhythimas). The diagnostic evaluation of patients with this syndrome is complicated. In arriving at a diagnosis, it is important to identify cases where the clinical presentation includes both serious medical illness (e.g., pneumonia, systemic infection, etc.) and untreated or inadequately retade drarpsymalidas igns and symptomic (EPS). Other important considerations in the differential diagnosis include central anticholinergic toxicity, heat stoke, drug lever and primary central nervous system (CNS) gathology.

The management of NMS should include 1) immediate discontinuation of antipsychotic drug and primary central nervous system (CNS) gathology.

The management of NMS should include 1) immediate discontinuation of antipsychotic drug antipsychotic drug preparation of which specific treatments are available. There is no general agreement about specific pharmacological treatment regimens for uncomplicated NMS.

If a patient requires antipsychot

periods). Blood dyscrasias (agranulocytosis, pancytopenia, thrombocytopenic purpura), and liver dama (jaundice, biliary stasis) have been reported with related drugs. Undue exposure to sunlight should be avoided. Photosensitive reactions have been reported in patie

on Navane (thiothixene).

Undue exposure to sunlight should be avoided. Photosensitive reactions have been reported in patier on Navane (thiothixene).
Intramuscular Administration—As with all intramuscular preparations, Navane Intramuscular should injected well within the body of a relatively large muscle. The preferred sites are the upper outer quadra of the buttock (i.e. gluteus maximus) and the mid-lateral thigh.
The deltoid area should be used only if well developed, such as in certain adults and older children, at then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into lower and mid-thirds of the upper arm. As with all intramuscular injections aspiration is necessary to he avoid inadvertent injection into a blood vessel.

Neuroleptic drugs elevate prolactin levels: the elevation persists during chronic administration. Tiss culture experiments indicate that approximately one third of human breast cancers are prolactin-depende in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient wa previously detected breast cancer. Although disturbances such as galactornea, amenornhea, gynec mastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels unknown for most patients. An increase in mammary neoplasms has been found in rodents after chroid administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to dat however, have shown an association between chronic administration of these drugs and mammary tumo igenesis; the available evidence is considered too limited to be conclusive at this time.

Information for Patients—Given the likelihood that some patients exposed chronically to neuroleptics we develop tardive dyskinesia, it is advised that all patients in whom chronic use is contemplated be given.

viously take into account the clinical circumstances and the competency of the patient to understand t

Information provided.

Adverse Reactions: Note: Not all of the following adverse reactions have been reported with Navat (thiothixene). However, since Navane has certain chemical and pharmacologic similarities to the phenoth azines, all of the known side effects and toxicity associated with phenothiazine therapy should be borne mind when Navane is used.

Cardiovascular effects: Tachycardia, hypotension, lightheadedness, and syncope. In the event hypote sion occurs, epinephrine should not be used as a pressor agent since a paradoxical further lowering of blo pressure may result. Nonspecific EKG changes have been observed in some patients receiving Navar (thiothixene). These changes are usually reversible and frequently disappear on continued Navane therap The incidence of these changes is lower than that observed with some phenothiazines. The clinical signic acce of these changes is not known.

CNS effects: Drowsiness, usually mild, may occur although it usually subsides with continuation Navane therapy. The incidence of sedation appears similar to that of the piperazine group of phenothiazine but less than that of certain alighatic phenothiazines. Restlessness, agitation and insomnia have been note with Navane. Seizures and paradoxical exacerbation of psychotic symptoms have occurred with Navar interequently.

intrequently.

Hyperreflexia has been reported in infants delivered from mothers having received structurally related.

Intequently.

Hyperreflexia has been reported in infants delivered from mothers having received structurally relate drugs.

In addition, phenothiazine derivatives have been associated with cerebral edema and cerebrospinal flu abnormalities.

Extrapyramidal symptoms, such as pseudo-parkinsonism, akathisia, and dystonia have been reporter Management of these extrapyramidal symptoms depends upon the type and severity. Rapid relief of act symptoms may require the use of an injectable antiparkinson agent. More slowly emerging symptoms me be managed by reducing the dosage of Navane and/or administering an oral antiparkinson agent.

Persistent Tadrive Dyskinesia: As with all antipsychotic agents tardive dyskinesia may appear in son patients on long-term therapy or may occur after drug therapy has been discontinued. The syndrome characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw (e.g., profussion tongue, putfing of cheeks, puckering of mouth, chewing movements). Sometimes these may be accor panied by involuntary movements of extremities.

Since early detection of tardive dyskinesia is important, patients should be monitored on an ongoing b sis. It has been reported that fine vermicular movement of the tongue may be an early sign of the syndrom if this or any other presentation of the syndrome is observed, the clinician should consider possible discontinuation of neuroleptic medication. (See Warnings section.)

Hepatic Effects: Elevations of serum transaminase and alkaline phosphatase, usually transient, habeen infrequently observed in some patients. No clinically confirmed cases of jaundice attributable 1 Navane have been reported.

Hematologic Effects: As is true with certain other psychotropic drugs, leukopenia and leukocytosi which are usually transient, can occur occasionally with Navane. Other antipsychotic drugs have been a sociated with agranulocytosis, eosinophilia, hemolytic anemia, thrombocytopenia and leukocytosi which are usually transient, can occur occasionally with Navane

Navane, exfoliative dermatitis and contact dermatitis (in nursing personnel) have been reported with certa

Navane, exfoliative dermatitis and contact dermatitis (in nursing personnei) have been reported with Navane, exfoliative dermatitis and contact dermatitis (in nursing personnei) have been reported in a smipercentage of females receiving Navane. If persistent, this may necessitate a reduction in dosage or the discontinuation of therapy. Phenothiazines have been associated with false positive pregnancy tests, encomastia, hypoglycemia, hyperglycemia, and glycosuria.

Autonomic Effects: Dry mouth, blurred vision, nasal congestion, constipation, increased sweating, i creased salivation, and impotence have occurred infrequently with Navane therapy. Phenothiazines have been associated with miosis, mydriasis, and adynamic ileus.

Other Adverse Reactions: Hyperpyrexia, anorexia, nausea, vomiting, diarrhea, increase in appetite at weight, weakness or fatigue, polydipsia and peripheral edema.

Although not reported with Navane, evidence indicates there is a relationship between phenothiazin therapy and the occurrence of a systemic lupus crythematosus-like syndrome.

Neuroleptic Malignant Syndrome (NMS): Please refer to the text regarding NMS in the WARNINC section.

NOTE: Sudden deaths have occasionally been reported in patients who have received certain phenott azine derivatives. In some cases the cause of death was apparently cardiac arrest or asphyxia due to failu of the cough reflex. In others, the cause could not be determined nor could it be established that death w. due to phenothiazine administration. Dosage: Dosage of Navane should be individually adjusted depending on the chronicity and severity of the

condition. See full prescribing information.

Overdosage: For information on signs and symptoms, and treatment of overdosage, see full prescribin

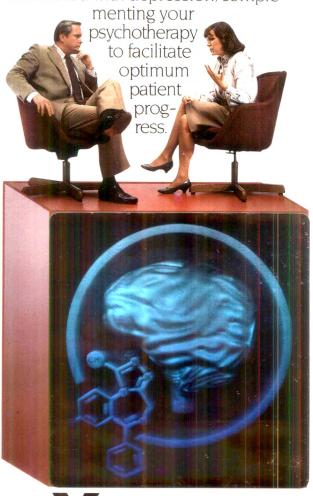


A division of Pfizer Pharmaceuticals New York, New York 10017

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.

The incorporation of a triazolo ring to the basic benzodiazepine structure clearly differentiates Xanax from other benzodiazepines.

Xanax effectively relieves anxiety associated with depression, comple-





COMPLEMENTS AN EFFECTIVE THERAPEUTIC ALLIANCE

Upjohn

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.



XANAX Tablets (alprazolam) @

CONTRAINDICATIONS

Patients with sensitivity to this drug or other benzodiazepines and in acute narrow angle glaucoma.

WARNINGS

Not of value in psychotic patients.
Caution patients against hazardous occupations requiring complete mental alertness and about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Benzodiazepines can cause fetal harm in pregnant women. Warn patients of the potential hazard to the fetus. Avoid during the first trimester.

PRECAUTIONS

General: The dosage of XANAX Tablets should be reduced or withdrawn gradually, since withdrawal seizures have been reported upon abrupt withdrawal. If XANAX is combined with other psychotropics or anticonvulsant drugs, consider drug potentiation (see Drug Interaction section). Exercise the usual precautions regarding size of the prescription for depressed or suicidal patients. In elderly and debilitated patients, use the lowest possible dosage (see Dosage and Administration). Observe the usual precautions in treating patients with impaired renal or hepatic function.

Information for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing dose of the drug due to risk of dependence, (e) not stopping the drug abruptly. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistamines, ethanol and other CNS depressants. Pharmacokinetic interactions with ben-

zodiazepines have been reported. *Drug/Laboratory Test Interactions:* No consistent pattern for a specific drug or specific test. *Carcinogenesis, Mutagenesis, Impairment of Fertility:* No carcinogenic potential or impairment of fertility in rats. *Pregnancy:* See Warnings. *Nonteratogenic Effects:* The child born of a mother on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity. *Labor and Delivery:* No established use. *Nursing Mothers:* Benzodiazepines are excreted in human milk. Women on XANAX should not nurse. *Pediatric Use:* Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS

Side effects are generally observed at the beginning of therapy and usually disappear with continued medication. In the usual patient, the most frequent side effects are likely to be an extension of the pharmacologic activity of XANAX, eg, drowsiness or lightheadedness.

Central nervous system. Drowsiness, lightheadedness, depression, headache, confusion, insomnia, nervousness, syncope, dizziness, akathisia, and tiredness/sleepiness.

Gastrointestinal: Dry mouth, constipation, diarrhea, nausea/vomiting, and increased salivation.

Cardiovascular: Tachycardia/
palpitations, and hypotension.
Sensory: Blurred vision.
Musculoskeletal: Rigidity and tremor.
Cutaneous: Dermatitis/allergy.
Other side effects: Nasal congestion,

weight gain, and weight loss. In addition, the following adverse events have been reported with the use of benzodiazepines: dystonia, irritability, concentration difficulties, anorexia, transient amnesia or memory impairment, loss of coordination, fatigue, sedation, slurred speech, jaundice, musculoskeletal weakness, pruritus, diplopia,

dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention.

Paradoxical reactions such as stimulation, agitation, increased muscle spasticity, sleep disturbances, and hallucinations may occur. Should these occur, discontinue the drug.

During prolonged treatment, periodic blood counts, urinalysis, and blood chemistry analysis are advisable. Minor EEG changes of unknown significance have been observed.

DRUG ABUSE AND DEPENDENCE

Physical and Psychological Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Withdrawal seizures have occurred upon rapid decrease or abrupt discontinuation of therapy. In all patients, dosage should be gradually tapered under close supervision. Patients with a history of seizures or epilepsy should not be abruptly withdrawn from XANAX. Addiction-prone individuals should be under careful surveillance. Controlled Substance Class: XANAX is a controlled substance and has been assigned to schedule IV.

CAUTION: FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.

B-4-S J-6338 January 1987

Upjohn

THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA

ALZHEIMER'S DEMENTIA

Cure of the disease is still out of reach.
In as devastating a condition as this,
HYDERGINE® LC (ergoloid mesylates)
can provide some relief of symptoms.
This is a contribution to both
patient and family.

is indicated for some patients over age sixty who manifest signs and symptoms of idiopathic mental decline. It appears that individuals who respond to HYDERGINE LC therapy are those who would be considered to suffer from some ill-defined process related to aging or to suffer from some underlying condition such as Alzheimer's dementia. Potentially reversible and treatable conditions should be excluded before using HYDERGINE LC therapy.

HYDERGINE® LC (ergoloid mesylates) liquid capsules, 1 mg

HYDERGINE LC (ergoloid mesylates) liquid capsules

Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, selfcare, apparent motivation) in patients over sixty. It appears that individuals who respond to HYDERGINE therapy are those who would be considered clinically to suffer from some ill-defined process related to aging or to have some underlying dementing condition, such as primary progressive dementia, Alzheimer's dementia, senile onset, or multi-infarct dementia. Before prescribing HYDERGINE® (ergoloid mesylates), the physician should exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis regardless of etiology (see Contraindications).

Use of HYDERGINE therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and overall impression of clinical status.

Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology. Precautions: Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing HYDERGINE (ergoloid mesylates) preparations.

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

Dosage and Administration: 1 mg three times daily. Alleviation of symptoms is usually gradual and results may not be observed for 3-4 weeks.

How Supplied: HYDERGINE LC (liquid capsules); 1 mg, oblong, off-white, branded "HYDERGINE LC 1 mg" on one side, "\(\delta\)" other side. Packages of 100 and 500. (Encapsulated by R. P. Scherer, N.A., Clearwater, Florida 33518).

HYDERGINE (ergoloid mesylates) tablets (for oral use); 1 mg, round, white, embossed "HYDERGINE 1" on one side, "&" other side. Packages of 100 and 500.

Each liquid capsule or tablet contains ergoloid mesylates USP as follows: dihydroergocornine mesylate $0.333~\rm mg$, dihydroergocristine mesylate $0.333~\rm mg$, and dihydroergocryptine (dihydroalpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate $0.333~\rm mg$, representing a total of $1~\rm mg$.

Also available: HYDERGINE sublingual tablets; 1 mg, oval, white, embossed "HYDERGINE" on one side, "78-77" other side. Packages of 100 and 1000. 0.5 mg, round, white, embossed "HYDERGINE 0.5" on one side, "&" other side. Packages of 100 and 1000.

HYDERGINE liquid; 1 mg/ml. Bottles of 100 mg with an accompanying dropper graduated to deliver 1 mg. [HYD-ZZ24-6 15 84]

Before prescribing, see package circular for full product information. HYD-1087-1



WORLD PSYCHIATRIC ASSOCIATION REGIONAL SYMPOSIUM

Hosted by the American Psychiatric Association

October 13-16, 1988 Washington, D.C.

The Research and Clinical Interface for Psychiatric Disorders

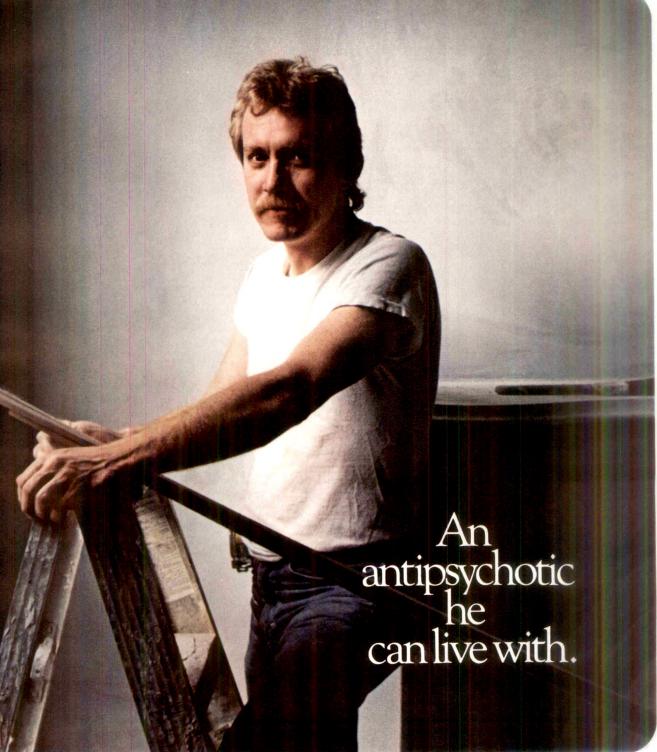
Continuing Medical Education Credits will be offered.

SCIENTIFIC AND ORGANIZING COMMITTEE:

Robert E. Hales, M.D., Chair Allen J. Frances, M.D. D. Ray Freebury, M.D. John Morihisa, M.D. Betty Pfefferbaum, M.D. Melvin Sabshin, M.D. Henry H. Work, M.D.

For further information, contact: Ellen Mercer, Office of International Affairs, American Psychiatric Association, 1400 K St., N.W., Washington, D.C. 20005 U.S.A. Phone: 202-682-6286

(mesoridazine) as the besylate in/concentrate/tablets &



Please see following page for brief summary of prescribing information

esoridazine) as the besylate R

(mesoridazine) besylate tablets USP (mesoridazine) besylate injection USP mesoridazine) besylate oral solution USP 0000

Tablets: 10, 25, 50 and 100 mg Concentrate: 25 mg/ml



Injectable: 1 ml (25 mg)

Brief Summary of Prescribing Information

Contraindications: As with other phenothiazines, Serentil* (mesoridazine), is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

Warnings: **Tardive** Dyskinesia:** Tardive** dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses.

doses. There is no known treatment for established cases of tardive dyskinesia, although the

develop, although much less commonly, after relatively brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness 1) that is known to respond to neuroleptic drugs, and 2) for which alternative, equally effective but potentially less harmful treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically. If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

(For further information about the description of tardive dyskinesia and its clinical detection, please refer to the sections on Information for Patients and Adverse Reactions). Where patients are participating in activities requiring complete mental alertness (e.g. driving) it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually.

Usage in Pregnancy: The safety of this drug in pregnancy has not been established, hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus.

Usage in Pregnancy: The use of Serentil (mesori

patients or for acute ambulatory cases, and keep patient lying down for at least one-half hour after injection. Leukopenia and/or agranulocytosis have been attributed to phenothiazine therapy. A single case of transient granulocytopenia has been associated with Serentii. Since convulsive seizures have been reported, patients receiving anticonvulsant medication should be maintained on that regimen while receiving Serentii. Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum grolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Information for Patients: Given the likelihood that some patients exposed chronically to neuroleptics will develop tardive dyskinesia, it is advised that all patients in whom chronic use is contemplated be given, if possible, full information about this risk.

Adverse Reactions: Drowsiness and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity and motoric effects) which occurred later in therapy. With the exception of a few frequency for the investigators to terminate treatment because of side effects. Serentil® (mesoridazine) has demonstrated a remarkably low incidence of

reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiness, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos) have been reported.

Autonomic Nervous System: Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and blurred vision have occurred in some instances.

Genitourinary System: Inhibition of ejaculation, impotence, enuresis, incontinence have been reported.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects)

Phenothiazine Derivatives: It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:

Autonomic Reactions: Erythema, exfoliative dermatitis, contact dermatitis.

Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.

Allergic Reactions: Fever, laryngeal edema, angioneurotic edema, asthma.

Hepatoloxicity: Jaundice, biliary stasis.

Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T wave and appearance of a wave tentatively identified as a briff T or a U wave have been observed in some patients receiving the phenothiazine tranquilizers, including Serentil* (mesoriotazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible. While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, it should be noted th

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions,

noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia. Tardive Dyskinesia: Chronic use of neuroleptics may be associated with the development of tardive dyskinesia. The salient features of this syndrome are described in the Warnings section and below.

The syndrome is characterized by involuntary choreoathetoid movements which variously involve the tongue, face, mouth, lips, or jaw (e.g. protrusion of the tongue, puffing of cheeks, puckering of the mouth, chewing movements), trunk and extremities. The severity of the syndrome and the degree of impairment produced vary widely. The syndrome may become clinically recognizable either during treatment, upon dosage reduction, or upon withdrawal of treatment. Movements may decrease in intensity and may disappear altogether if further treatment with neuroleptics is withheld. It is generally believed that reversibility is more likely after short rather than long-term neuroleptic exposure. Consequently, early detection of tardive dyskinesia is important. To increase the likelihood of detecting the syndrome at the earliest possible time, the dosage of neuroleptic drug should be reduced periodically (if clinically possible) and the patient observed for signs of the disorder. This maneuver is critical, for neuroleptic drugs may mask the signs of the disorder. This maneuver is critical, for neuroleptic drugs may mask the signs of the patient observed for signs of spositive pregnancy tests have been reported.

Uninary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behavioral effects suggestive of a paradoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently, a peculiar skin-eye syndrome has been recognized as a side effect following long-term treatment with phenothiazines. This reaction is marked by progressive pigmentation of areas of the s

described as Irregular or stellate in shape that all supported the erythematosus-like syndrome.

How Supplied:
Serentil® Tablets, for oral administration: 10 mg, 25 mg, 50 mg, and 100 mg mesoridazine (as the besylate). Bottles of 100.

Serentil® Ampuls, for intramuscular administration: 1 ml (25 mg mesoridazine (as the besylate)). Boxes of 20 and 100.

Serentil® Concentrate, for oral administration: Contains 25 mg mesoridazine (as the besylate) per ml, alcohol, USP, 0.61% by volume.

Immediate containers: Amber glass bottles of 4 fl oz (118 ml) packaged in cartons of 12 bottles, with an accompanying dropper graduated to deliver 10 mg, 25 mg and 50 mg of mesoridazine (as the besylate).

Consult package insert before prescribing.

SE-BPI-9/85



Boehringer Ingelheim Pharmaceuticals, Inc. Ridgefield, CT 06877

Physicians prescribe Ativan for what it doesn't do—as well as for what it does



...it <u>does</u> effectively relieve anxiety

nzodiazepines have not been shown to be of benefit reating the cardiovascular component.



generally mild and transitory.)

Physicians prescribe Ativan for what it doesn't do-as well as for what it does



Only Ativan offers all these benefits...

rapid relief of anxiety

clearance not significantly delayed by age, liver or kidney dysfunction

cumulative sedative effects seldom a problem (Sedation, reported in 15.9% of patients in clinical trials, was generally mild and transitory.)

little likelihood of drug interaction (All benzodiazepines produce additive sedative effects when taken with alcohol or other CNS depressants.)

no significant changes in vital signs in cardiovascular patients*

short duration of action, simple metabolism

*Benzodiazepines have not been shown to be of benefit in treating the cardiovascular component



Specify Ativan—and assure your patients' therapy

Indicate one of the following on your prescriptions, as appropriate to your state laws:

- Do not substitute
- Brand necessary
- Dispense as written
- May not substitute
- Medically necessary
- No substitution
- NDPS (no drug product selection)

Brief Summary of Prescribing Inform

Indications and Usage: Management symptoms of anxiety or anxiety associated tension associated with stress of everydates.

with an anxiolytic.

Effectiveness in long-term use, i.e., mc
by systematic clinical studies. Reassess individual patient.

Contraindications: Known sensitivity to

Warnings: Not recommended in primary. As with all CNS-acting drugs, warn paties vehicles, and of diminished tolerance for Physical and Psychological Depender noted with barbiturates and alcohol have

noted with parburates and accordinate ance of benzodiazepines (including comcramps, vomiting and sweating). Addictic and alcoholics, should be under careful s because of their predisposition to habitus symptoms have also been reported follow diazepines taken continuously at therape

Precautions: In depression accompany

suicide.

For elderly or debilitated patients, initia avoid oversedation. Terminate dosage gr antianxiety agent may result in symptoms tion, irritability, tension, insomnia and occ precautions with impaired renal or hepatii diovascular disorders coexist with anxiety shown of significant benefit in treating gainent Esophageal dilation occurred in rate. nent. Esophageal dilation occurred in rat 1 year at 6mg/kg/day. No effect dose was mum human therapeutic dose of 10mg/di ment was withdrawn within 2 months of fir unknown; but use of lorazepam for prolon caution and frequent monitoring for symp effectiveness in children under 12 years h ESSENTIAL LABORATORY TESTS: Some some have had elevations of LDH. As with counts and liver function tests are recomm CLINICALLY SIGNIFICANT DRUG INTER CNS depressant effects when administer or alcohol

CARCINOGENESIS AND MUTAGENESIS emerged in rats during an 18-month study have been performed.

PREGNANCY: Reproductive studies were rabbits. Occasional anomalies (reduction limbs, gastroschisis, malformed skull and reated rabbits without relationship to dos not present in the concurrent control group randomly in historical controls. At 40mg/k resorption and increased fetal loss in rabb Clinical significance of these findings is no congenital malformations associated with congenital malformations associated with poxide, diazepam and meprobamate) dui been suggested in several studies. Becau of urgency, use of lorazepam during this p Possibility that a woman of child-bearing p therapy should be considered. Advise pat municate with their physician about desire humans, blood levels from umbilical cord lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if ora like other benzodiazepines. As a general up the possible of the proposition of the possible of the proposition of the provided of the proposition of the provided of the p

like other benzodiazepines. As a general while on a drug since many drugs are exc

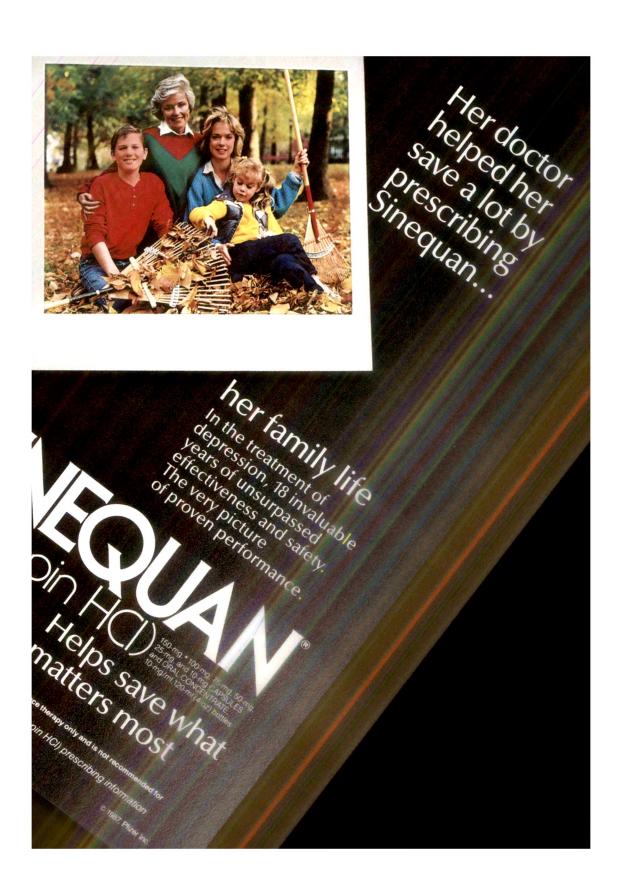
Adverse Reactions, if they occur, are usi and generally disappear on continued me sample of about 3,500 anxious patients, r tion (15.9%), followed by dizziness (6.9%), (3.4%). Less frequent are disorientation, di (3.4%). Less irequent are disorientation, or headache, sleep disturbance, agitation, d disturbance, various gastrointestinal symplocidence of sedation and unsteadiness ir blood pressure have been noted but are not related to relief of anxiety.

Transient amnesia or memory impairment the use of benzodiazepines.

Overdosage: In management of overdosagents may have been taken. Manifestatio confusion and coma. Induce vomiting and general supportive care, monitoring vital si sion, though unlikely, usually may be contribrigetion U.S.P. Usefulness of dialysis has i

DOSAGE: Individualize for ma dose gradually when nee before increasing daytin day given b.l.d. or t.l.d.; day in divided doses. Fi 1-2mg/day; insomnia di stress, 2-4mg h.s. HOW SUPPLIED: 0.5, 1.

The appearances of Ativan tablets are registered trademarks of Wyeth Laborator



- BRIEF SUMMARY
 SINEQUAN* (doxepin HCI) Capsules/Oral Concentrate
 Indications. SINEQUAN is recommended for the treatment of:

 1. Psychoneurotic patients with depression and/or anxiety.

 2. Depression and/or anxiety associated with alcoholism (not to be taken concomitantly with

3. Depression and/or anxiety associated with organic disease (the possibility of drug interaction should be considered if the patient is receiving other drugs concomitantly).

4. Psychotic depressive disorders with associated anxiety including involutional depression and manic-depressive disorders.

The target symptoms of psychoneurosis that respond particularly well to SINEQUAN include anxiety, tension, depression, somatic symptoms and concerns, sleep disturbances, guilt, lack of energy, fear, anorehension and worry.

tension, depression, somatic symptoms and concerns, sleep disturbances, guilt, lack of energy, fear, apprehension and worry.

Clinical experience has shown that SINEQUAN is safe and well tolerated even in the eiderly patient. Owing to lack of clinical experience in the pediatric population, SINEQUAN is not recommended for use in children under 12 years of age.

Contraindications. SINEQUAN is contraindicated in individuals who have shown hypersensitivity to the drug. Possibility of cross sensitivity with other dibenzoxepines should be kept in mind.

SINEQUAN is contraindicated in patients with glaucoma or a tendency to urinary retention. These disorders should be ruled out, particularly in older patients.

Warnings. The once-a-day dosage regimen of SINEQUAN in patients with intercurrent illness or patients taking other medications should be carefully adjusted. This is especially important in patients receiving other medications with anticholinergic effects.

Usage in Geriatrics: The use of SINEQUAN on a once-a-day dosage regimen in geriatric patients should be adjusted carefully based on the patient's condition.

Usage in Pregnancy: Reproduction studies have been performed in rats, rabbits, monkeys and dogs and there was no evidence of harm to the animal fetus. The relevance to humans is not known. Since there is no experience in pregnant women who have received this drug, safety in pregnancy has not been established. There are no data with respect to the secretion of the drug in human milk and its effect on the nursing infant.

the nursing infant.

**Usage in Children: The use of SINEQUAN in children under 12 years of age is not recommended.

Usage in Children: The use of SINEQUAN in children under 12 years of age is not recommended because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN. The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Usage with Alcohol: It should be borne in mind that alcohol ingestion may increase the danger inherent in any intentional or unintentional SINEQUAN overdosage. This is especially important in natients who may use alcohol expressived.

Usage with Alcohol: It should be borne in mind that alcohol ingestion may increase the danger inherent in any intentional or unintentional SINEQUAN overdosage. This is especially important in patients who may use alcohol excessively.
Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking the drug.
Patients should also be cautioned that their response to alcohol may be potentiated.
Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy.
Prescriptions should be written for the smallest feasible amount.
Should increased symptoms of psychosis or shift to manic symptomatology occur, it may be necessary to reduce dosage or add a major tranquilizer to the dosage regimen.
Adverse Reactions. MOTE: Some of the adverse reactions noted below have not been specifically reported with SINEQUAN use. However, due to the close pharmacological similarities among the tricyclics, the reactions should be considered when prescribing SINEQUAN.
Anticholinergic Effects. Dry mouth, blurred vision, constipation, and urinary retention have been reported. If they do not subside with continued therapy, or become severe, it may be necessary to reduce the dosage.
Central Nervous System Effects: Drowsiness is the most commonly noticed side effect. This tends to disappear as therapy is continued. Other infrequentity reported CNS side effects are confusion, disprientation, hallucinations, numbness, paresthesias, ataxia, and extrapyramidal symptoms and seizures.
Cardiovascular: Cardiovascular effects including hypotension and tachycardia have been reported occasionally.

occasionally.

Allergic: Skin rash, edema, photosensitization, and pruritus have occasionally occurred Hematologic: Eosinophilia has been reported in a few patients. There have been occasional reports of bone marrow depression manifesting as agranulocytosis, leukopenia, thrombocytopenia, and purpura. Gastrointestinal: Nausea, vomiting, indigestion, taste disturbances, diarrhea, anorexia, and aphthous stomatitis have been reported. (See anticholinergic effects.)

Endocrine: Raised or lowered libido, testicular swelling, gynecomastia in males, enlargement of breasts and galactorrhea in the female, raising or lowering of blood sugar levels, and syndrome of inappropriate antidiuretic hormone have been reported with tricyclic administration. Other: Dizziness, tinnitus, weight gain, sweating, chills, fatigue, weakness, flushing, jaundice, alopecia, and headache have been occasionally observed as adverse effects.

Withdrawal Symptoms: The possibility of development of withdrawal symptoms upon abrupt cessation of treatment after prolonged SINEQUAN (doxepin HCl) administration should be berne in mind. These are not indicative of addiction and gradual withdrawal of medication should not cause these symptoms.

These are not indicative of addiction and gradual withdrawal of medication should not cause these symptoms.

Dosage and Administration. For most patients with illness of mild to moderate severity, a starting daily dose of 75 mg is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg/day to 150 mg/day. In more severely ill patients higher doses may be required with subsequent gradual increase to 300 mg/day. In patients with very mild symptomatology or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg/day. The total daily dosage of SINEQUAN may be given on a divided or once-a-day dosage schedule. If the once-a-day schedule is employed the maximum recommended dose is 150 mg/day. This dose may be given at bedtime. The 150 mg capsule strength is intended for maintenance therapy only and is not recommended for initiation of treatment.

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not be evident for two to three weeks.

- Overdosage.
 A. Signs and Symptoms
 I. Mild: Drowsiness, stupor, blurred vision, excessive dryness of mouth.
 2. Severe: Respiratory depression, hypotension, coma, convulsions, cardiac arrhythmias and

acinycarolas.

Also: urinary retention (bladder atony), decreased gastrointestinal motility (paralytic ileus), hyper-thermia (or hypothermia), hypertension, dilated pupils, hyperactive reflexes.

B. Management and Treatment

thermia (or nypotnermia), nypertension, onateu pupils, nyperactive renexes.

8. Management and Treatment
1. Mild: Observation and supportive therapy is all that is usually necessary.
2. Severe: Medical management of severe SINEQUAN overdosage consists of aggressive supportive therapy. If the patient is conscious, gastric lavage, with appropriate precautions to prevent pulmonary aspiration, should be performed even though SINEQUAN is rapidly absorbed. The use of activated charcoal has been recommended, as has been continuous gastric lavage with saline for 24 hours or more. An adequate airway should be established in comatose patients and assisted ventilation used if necessary. EKG monitoring may be required for several days, since relapse after apparent recovery has been reported. Arrhythmias should be treated with the appropriate antiarrhythmic agent. It has been reported that many of the cardiovascular and CNS symptoms of tricyclic antidepressant poisoning in adults may be reversed by the slow intravenous administration of 1 mg to 3 mg of physostigmine salicylate. Because physostigmine is rapidly metabolized, the dosage should be repeated as required. Convulsions may respond to standard anticonvulsant therapy, however, barbiturates may potentiate any respiratory depression. Dialysis and forced diuresis generally are not of value in the management of overdosage due to high tissue and protein binding of SINEQUAN.

More detailed professional information available on request



Consultation Service

American Psychiatric Association

Administrative, Organizational, Programmatic, and Quality of Care Consultation to:

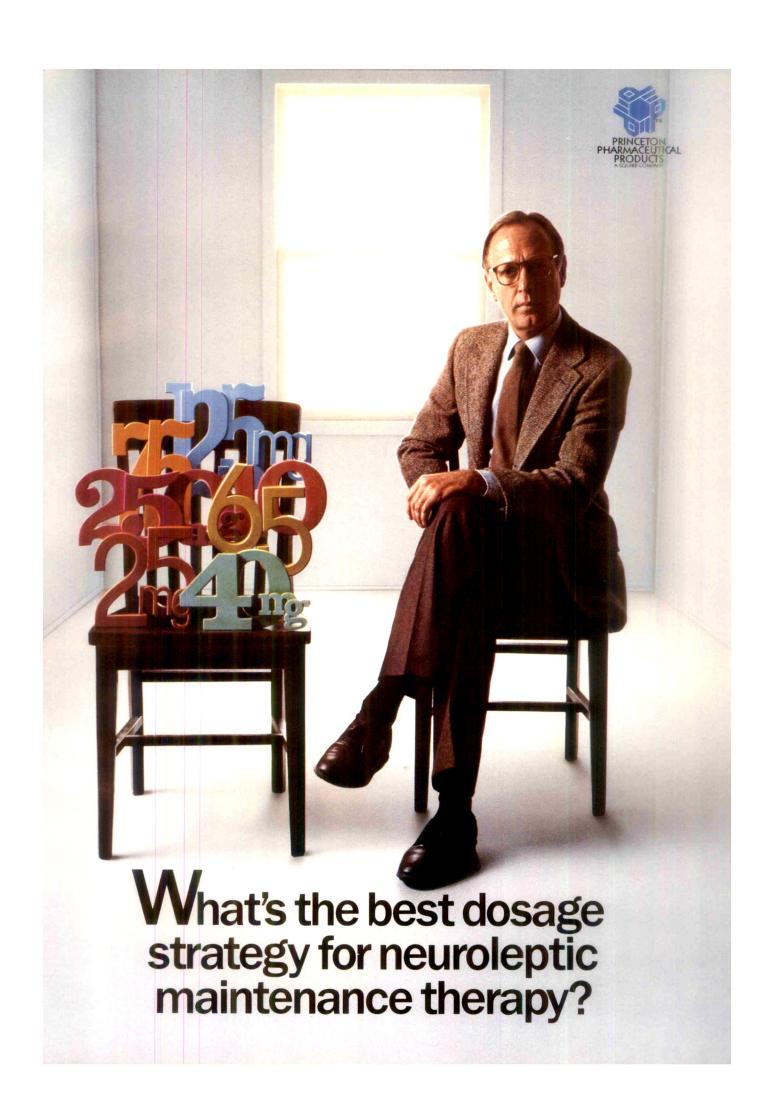
- Psychiatric units in general hospitals
- Outpatient clinics
- Private and state psychiatric hospitals
- Specialized hospitals
- Residential programs
- Community mental health centers
- State mental health systems
- Specialized services for:
 - -mentally ill persons
 - -mentally retarded and developmentally disabled persons
 - -children and adolescents
 - —the aging
 - —drug abusers
 - -alcohol abusers
 - —criminal offenders

Our Range of Services Includes but Is Not Limited to:

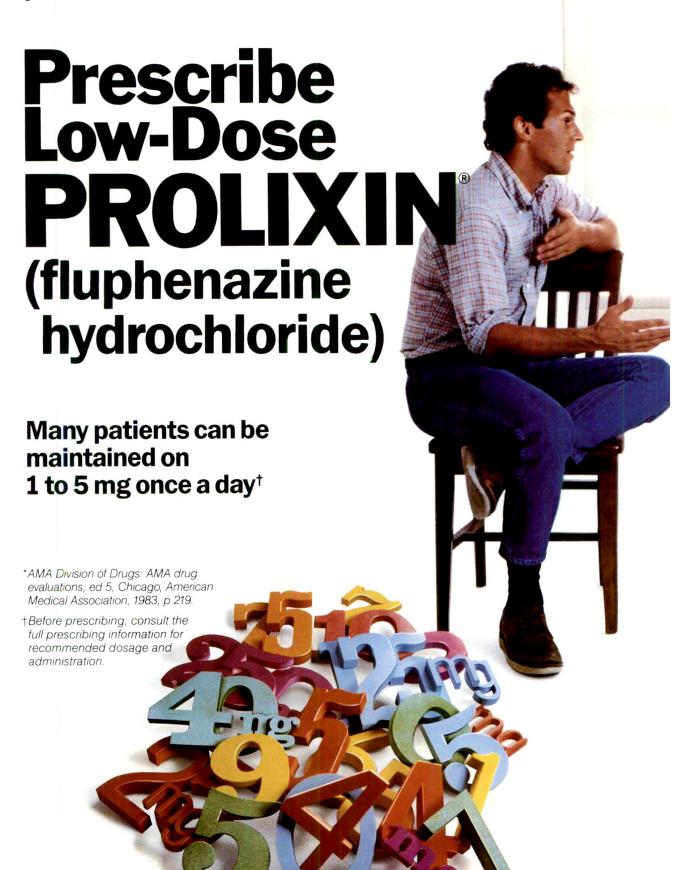
- conflict resolution
- design and planning of clinical programs
- analysis of clinical and management
- integration of services, to provide continuity
- evaluation of clinical services
- assistance in developing priorities among service needs
- advice on moving toward compliance with standards of government or private accreditation boards
- aid in meeting the requirements of external planning bodies
- referral to other sources of help
- planning to meet future service needs, consistent with fiscal contingencies

CONTACT:

Consultation Service American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005 (202) 682-6091



The maintenance dose should be the minimum amount that maintains therapeutic response and allows the patient to function best. 77*





Safe, effective treatment

Helps avoid side effects most commonly associated with low-potency neuroleptics*

- Less sedation¹
- Fewer anticholinergic effects²
- Less risk of cardiovascular effects²
- Rarely reported sexual dysfunction²

Acute care through maintenance therapy

The low-dose PROLIXIN® family of products offers continuity of care, with a dosage form for every need:

- Oral concentrate or fast-acting injection for treatment of acute psychosis
- Tablets, oral concentrate, or elixir for oral maintenance
- ► Long-acting PROLIXIN DECANOATE® (fluphenazine decanoate injection) for depot maintenance

PROLIXIN® (fluphenazine hydrochloride) ORAL MAINTENANCE

Lowering the dose, lowering dose-related side effects

Please see brief summary on last page of this advertisement.

^{*} While the risk of extrapyramidal symptoms is increased with high-potency neuroleptics, these symptoms are usually dose-related and can generally be controlled by dosage adjustments.

Low-dose PROLIXIN (Trupmenazine hydrochloride)

Choose experience: Dispense as written*



PROLIXIN® Tablets (fluphenazine hydrochloride tablets USP)

1, 2.5, 5, and 10 mg-bottles of 50 and 500, and Unimatic® unit-dose packs of 100



PROLIXIN® Oral Concentrate (fluphenazine hydrochloride oral solution)

5 mg/mL in bottles of 120 mL with calibrated dropper

*Please check the substitution laws in your state

PROLIXIN®

Fluphenazine Hydrochloride

TABLETS/ELIXIR/ORAL CONCENTRATE/INJECTION

PROLIXIN DECANOATE

Fluphenazine Decanoate Injection

DESCRIPTION: Prolixin Tablets (Fluphenazine Hydrochloride Tablets USP) provide 1, 2.5, 5, or 10 mg fluphenazine hydrochloride per tablet. Prolixin 2.5, 5, and 10 mg tablets contain FD&C Yellow No. 5 (tartrazine). Prolixin Elixir (Fluphenazine Hydrochloride Elixir USP) provides 0.5 mg fluphenazine hydrochloride per mL (2.5 mg per 5 mL teaspoonful) with 14% alcohol by volume. Prolixin Oral Concentrate fluphenazine Hydrochloride Oral Solution*) provides 5 mg fluphenazine hydrochloride per mL, with 14% alcohol by volume (exceeds the USP monograph 1.2% limit). Prolixin Injection (Fluphenazine Hydrochloride Injection USP) provides 2.5 mg fluphenazine hydrochloride per mL; it contains 0.1% methylparaben and 0.01% propylparaben as preservatives. Prolixin Decanoate (Fluphenazine Decanoate Injection) provides 25 mg fluphenazine decanoate per mL in a sesame oil vehicle with 1.2% (w/v) benzyl alcohol as preservative.

CONTRAINDICATIONS: In the presence of suspected or established subcortical brain damage. In patients who have a blood dyscrasia or liver damage, or who are receiving large doses of hypnotics, or who are comatose or severely depressed. In patients who have shown hypersensitivity to fluphenazine; cross-sensitivity to phenothiazine derivatives may occur. Fluphenazine Decanoate is not intended for use in children under 12.

WARNINGS: Tardive Dyskinesia-potentially irreversible, involuntary, dyskinetic movements may develop. This syndrome appears to be most prevalent among the elderly, especially women; however, prevalence estimates do not reliably predict, at the inception of neuroleptic treatment, those patients likely to develop the syndrome. It is unknown if neuroleptics differ in their potential to cause tardive dyskinesia. The risk of developing the syndrome and the likelihood of its irreversibility are believed to increase as duration of treatment and cumulative dose increase. Although uncommon, the syndrome can develop after brief treatment at low doses. There is no known treatment for tardive dyskinesia, although partial or complete remission may occur with withdrawal of the neuroleptic. Neuroleptic treatment may suppress signs and symptoms of the syndrome and may mask the underlying disease process. The effect of symptomatic suppression on the long-term course of the syndrome is unknown. Neuroleptics should, thus, be prescribed with consideration for the potential of tardive dyskinesia. Chronic treatment should generally be reserved for patients with chronic illness that responds to neuroleptic drugs, and for whom alternative effective, less harmful treatments are not available or appropriate. Patients requiring chronic treatment should receive the smallest dose and shortest duration of treatment producing a satisfactory clinical response. Continuation of treatment should be reassessed periodically. If signs and symptoms of tardive dyskinesia appear, neuroleptic discontinuation should be considered. However, some patients may require continued treatment. (See PRECAUTIONS and ADVERSE REACTIONS.)

Mental and physical abilities required for driving a car or operating heavy machinery may be impaired by use of this drug. Potentiation of effects of alcohol may occur. Safety and efficacy in children have not been established because of inadequate experience in use in children. Severe adverse reactions, requiring immediate medical attention, may possibly occur.

Usage In Pregnancy: Safety for use during pregnancy has not been established; weigh possible hazards against potential benefits if administering any of these drugs to pregnant patients.

PRECAUTIONS: Caution must be exercised if another phenothiazine compound caused cholestatic jaundice, dermatoses or other allergic reactions because of the possibility of cross-sensitivity. Prolixin Tablets (Fluphenazine Hydrochloride Tablets USP) 2.5, 5, and 10 mg contain FD&C Yellow No. 5 (tartrazine) which may cause allergic-type reactions (including bronchial asthma) in certain susceptible individuals. Although the overall incidence of FD&C Yellow No. 5 (tartrazine) sen-



PROLIXIN® Elixir (fluphenazine hydrochloride elixir USP)

0.5 mg/mL—orange-flavored in bottles of 473 mL (1 pint) and 60 mL dropper-assembly bottles



PROLIXIN® Injection (fluphenazine hydrochloride injection USP)

2.5 mg/mL in multiple-dose vials of 10 mL

sitivity in the general population is low, it is frequently seen in patients who also have aspirin hypersensitivity. When psychotic patients on large doses of a phenothiazine drug are to undergo surgery, hypotensive phenomena should be watched for; less anesthetics or central nervous system depressants may be required. Because of added anticholinergic effects, fluphenazine may potentiate the effects of atropine.

Use fluphenazine cautiously in patients exposed to extreme heat or phosphorus insecticides; in patients with a history of convulsive disorders, since grand mal convulsions have occurred; and in patients with special medical disorders, such as mitral insufficiency or other cardiovascular diseases and pheochromocytoma. Bear in mind that with prolonged therapy there is the possibility of liver damage, pigmentary retinopathy, lenticular and corneal deposits, and develop-ment of irreversible dyskinesia.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical sig-nificance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic admin-istration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is

considered too limited to be conclusive at this time.

Periodic checking of hepatic and renal functions and blood picture should be done. Monitor renal function of patients on long-term therapy; if BUN becomes abnormal, discontinue fluphenazine. "Silent pneumonias" are possible. Fluphenazine decanoate should be administered under the direction of a physician experienced in the clinical use of psychotropic drugs.

Information for Patients: It is likely that some patients exposed chronically to neuroleptics will develop tardive dyskinesia; full information should be given to all patients, if possible, who are candidates for chronic use. Informing patients and/or guardians must take into account clinical circumstances and patient competency.

Abrupt Withdrawal: In general, phenothiazines do not produce psychic dependence. However, gastritis, nausea and vomiting, dizziness, and tremulousness have been reported following abrupt cessation of high dose therapy; reports suggest that these symptoms can be reduced if concomitant antiparkinsonian agents are continued for several weeks after the phenothiazine is withdrawn.

ADVERSE REACTIONS: Central Nervous System: Extrapyramidal symptoms are most frequently reported. Most often these symptoms are reversible, but they may be persistent. They include pseudoparkinsonism, dystonia, dyskinesia, akathisia, oculogyric crises, opisthotonos, and hyperreflexia. Muscle rigidity sometimes accompanied by hyperthermia has been reported following use of fluphenazine decanoate. One can expect a higher incidence of such reactions with fluphenazine decanoate than with less potent piperazine derivatives or straight-chain phenothiazines. The incidence and severity of such reactions will depend more on individual patient sensitivity, but dosage level and patient age are also determinants. As these reactions may be alarming, the patient should be forewarned and reassured. These reactions can usually be controlled by administration of an antiparkinsonian drug such as benztropine mesylate and by subsequent reduction in dosage

Tardive Dyskinesia: See WARNINGS. Characterized by involuntary choreoraraive Dyskinesia: See WAHNINGS. Characterized by involuntary choreo-athetoid movements involving tongue, face, mouth, lips, or jaw (e.g., tongue pro-trusion, puffing cheeks, puckering mouth, chewing movements), trunk and extremities. Severity and degree of impairment vary widely. May become clinically recognizable either during treatment, dosage reduction, or treatment withdrawal. To facilitate early detection, reduce dosage periodically (if clinically possible) and observe for signs of the disorder, especially since neuroleptics may mask the signs of the syndrome

References: 1. Baldessarini RJ: Drugs and the treatment of psychiatric disorders, in Gilman AG, Goodman LS (eds): The Pharmacological Basis of Therapeutics, ed 6. New York, Macmillan Publishing Co, Inc., 1980, p 415. 2. Mason AS, Granacher RP: Clinical Handbook of Antipsychotic Drug Therapy. New York, Brunner/Mazel, 1980, pp 203, 221, 239.

Rare occurrences of neuroleptic malignant syndrome (NMS) have been reported in patients on neuroleptic therapy. The syndrome is characterized by hyperthermia, muscular rigidity, autonomic instability (labile blood pressure, tachycardia, diaphoresis), akinesia, and altered consciousness, sometimes progressing to stupor or coma. Leukocytosis, elevated CPK, liver function abnormalities, and acute renal failure may also occur. Neuroleptic therapy should be discontinued immediately and vigorous symptomatic treatment implemented since the syndrome is potentially fatal.

Phenothiazine derivatives have been known to cause restlessness, excitement, or bizarre dreams; reactivation or aggravation of psychotic processes may be encountered. If drowsiness or lethargy occurs, the dosage may need to be reduced. Dosages, far in excess of the recommended amounts, may induce a catatonic-like state.

Autonomic Nervous System: Hypertension and fluctuations in blood pressure have been reported. Although hypotension is rarely a problem, patients with pheochromocytoma, cerebral vascular or renal insufficiency, or a severe cardiac reserve deficiency such as mitral insufficiency appear to be particularly prone to this reaction and should be observed carefully. Supportive measures including intravenous vasopressor drugs should be instituted immediately should severe hypotension occur; Levarterenol Bitartrate Injection is the most suitable drug; epinephrine should not be used since phenothiazine derivatives have been found to reverse its action. Nausea, loss of appetite, salivation, polyuria, perspiration, dry mouth, headache, and constipation may occur. Reducing or temporarily discontinuing the dosage will usually control these effects. Blurred vision, glaucoma, bladder paralysis, fecal impaction, paralytic ileus, tachycardia, or nasal congestion have occurred in some patients on phenothiazine derivatives.

Metabolic and Endocrine: Weight change, peripheral edema, abnormal lactation, gynecomastia, menstrual irregularities, false results on pregnancy tests, impotency in men and increased libido in women have occurred in some patients on phenothiazine therapy.

some patients on phenothiazine therapy. Allergic Reactions: Itching, erythema, urticaria, seborrhea, photosensitivity, eczema and exfoliative dermatitis have been reported with phenothiazines. The possibility of an

Hematologic: Blood dyscrasias including leukopenia, agranulocytosis, thrombocytopenic or nonthrombocytopenic purpura, eosinophilia, and pancytopenia have been observed with phenothiazines. If soreness of the mouth, gums or throat, or any symptoms of upper respiratory infection occur and confirmatory leukocyte count indicates cellular depression, therapy should be discontinued and other appropriate measures instituted immediately.

Hepatic: Liver damage manifested by cholestatic jaundice, particularly during the first months of therapy, may occur; treatment should be discontinued. A cephalin flocculation increase, sometimes accompanied by alterations in other liver function tests, has been reported in patients who have had no clinical evidence of liver damage.

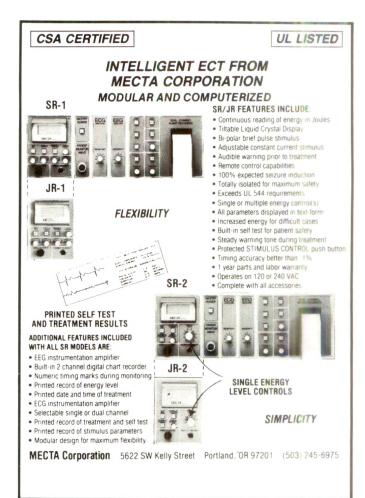
damage.

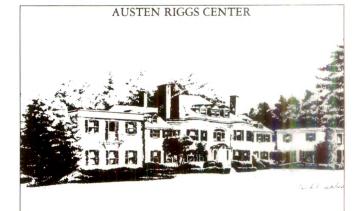
Others: Sudden deaths have been reported in hospialized patients on phenothiazines. Previous brain damage or seizures may be predisposing factors. High doses should be avoided in known seizure patients. Shortly before death, several patients showed flare-ups of psychotic behavior patterns. Autopsy findings have usually revealed acute fulminating pneumonia or pneumonitis, aspiration of gastric contents, or intramyocardial lesions. Although not a general feature of fluphenazine, potentiation of central nervous system depressants such as opiates, analgesics, antihistamines, barbiturates and alcohol may occur.

Systemic lupus erythematosus-like syndrome, hypotension severe enough to cause fatal cardiac arrest, altered electrocardiographic and electroencephalographic tracings, altered cerebrospinal fluid proteins, cerebral edema, asthma, laryngeal edema, and angioneurotic edema; with long-term use, skin pigmentation, and lenticular and corneal opacities have occurred with phenothiazines. Local tissue reactions occur only rarely with injections of fluphenazine decanoate.

HOW SUPPLIED: Tablets—1 mg, 2.5 mg, 5 mg, and 10 mg in bottles of 50, 100 and 500, and in Unimatic* cartons of 100. Elixir—in bottles of 473 mL (1 pint) and in 60 mL dropper-assembly bottles with calibrated dropper. Oral Concentrate—in bottles of 120 mL with calibrated dropper. Injection—in multiple-dose vials of 10 mL. Fluphenazine Decanoate—in 1 mL Unimatic* single dose preassembled syringes and 5 mL vials.

For full prescribing information, consult package inserts. (J4-120/147/153/150)





Psychoanalytic Psychotherapy in an Open Hospital Setting

Treatment with Dignity, Personal Responsibility and Quality Long-Term Results

The Austen Riggs Center Stockbridge, Massachusetts 01262 (413) 298-5511

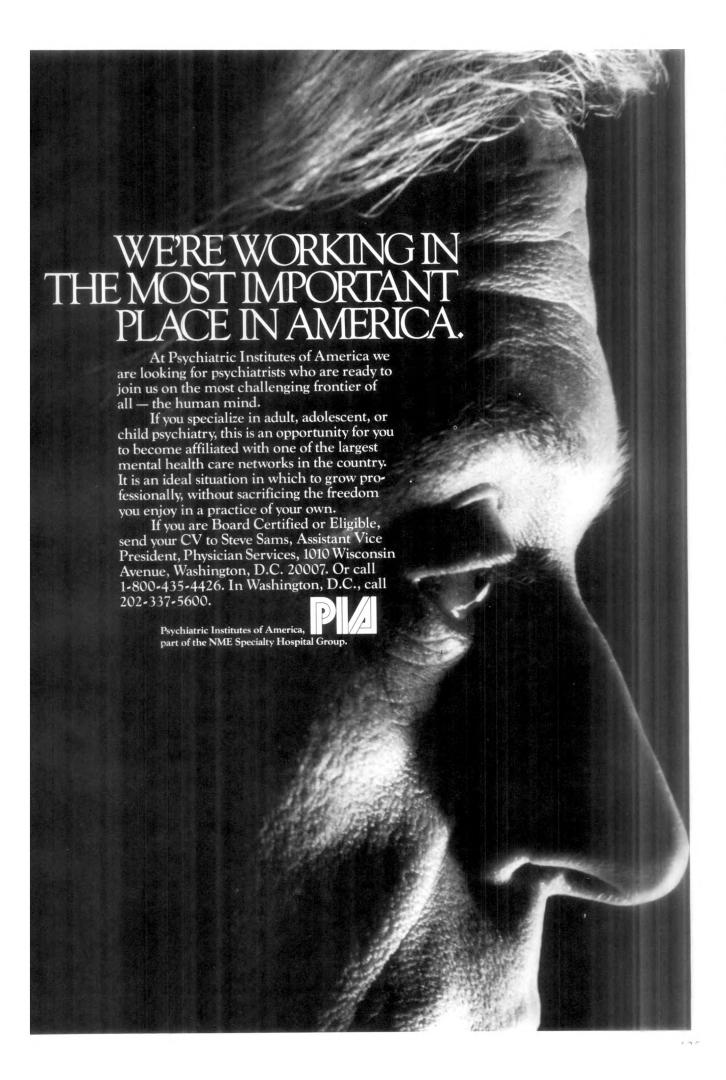
Founded in 1919

- To Thine Own Self Be True: The Rebirth of Values in the New Ethical Therapy, by Lewis M. Andrews, Ph.D. Garden City, N.Y., Anchor Press (Doubleday), 1987, 222 pp., \$16.95.
- Anchor Press (Doubleday), 1987, 222 pp., \$16.95.
 Informed Consent: Legal Theory and Clinical Practice, by Paul S. Appelbaum, M.D., Charles W. Lidz, Ph.D., and Alan Meisel, J.D. New York, Oxford University Press, 1987, 269 pp., \$27.95.
- The Use of Self in Therapy, edited by Michele Baldwin and Virginia Satir. New York, Haworth Press, 1987, 155 pp., \$29.95; \$14.95 (paper).
- Clinique, Théorie et Technique: Les Interrogations du Psychanalyste, by Jean Bergeret. Paris, Presses Universitaires de France, 1987, 193 pp., 98 French francs (paper).
- The Jewish Pleasure Principle, by Rabbi Reuven P. Bulka, Ph.D. New York, Human Sciences Press, 1987, 148 pp., \$24.95.
- A Psychoanalytic and Cultural Study of the Krupp Family: An Inquiry Into Some of the Roots of German Character Formation, by Roy C. Calogeras. New York, Vantage Press, 1987, 226 pp., \$14.95.
- La Parole Troublée, by Robert Christe, Marie-Madeleine Christe-Luterbacher, and Pierre Luquet. Paris, Presses Universitaires de France, 1987, 300 pp., 165 French francs (paper).
- Measures for Clinical Practice: A Sourcebook, by Kevin Corcoran and Joel Fischer. New York, Free Press (Macmillan), 1987, 475 pp., \$35.00.
- Destins de la Femininité, by Jacqueline Cosnier. Paris, Presses Universitaires de France, 1987, 240 pp., 120 French francs (paper).
- Psychological Treatment of Mental Illness: Research Strategies and Design, edited by R.J. Daly and E.A. Sand in collaboration with E.E. Anttinen, T. Helgason, H. Hippius, and R. Sadoun. New York, Springer-Verlag, 1987, 152 pp., no price listed.
- Psychosocial Aspects of Chemotherapy in Cancer Care: The Patient, Family, and Staff, edited by Robert DeBellis, George A. Hyman, Irene B. Seeland, Austin H. Kutscher, Alison Kimberg, Mary-Ellen Siegel, and Lillian G. Kutscher. New York, Haworth Press, 1987, 136 pp., \$24.95.
- The Mechanism of Mind (1969), by Edward de Bono. New York, Penguin Books, 1987, 281 pp., \$7.95 (paper).
- Parsing Through Customs: Essays by a Freudian Folklorist, by Alan Dundes. Madison, University of Wisconsin Press, 1987, 194 pp., \$22,75
- Homes for the Mad: Life Inside Two Nineteenth-Century Asylums, by Ellen Dwyer. New Brunswick, N.J., Rutgers University Press, 1987, 304 pp., \$32.00.
- To Be or Not To Be Human: The Traits of Human Nature, by Ben Freedman. New York, Vantage Press, 1987, 509 pp., \$20.00.
- Rediscovering Love (1986), by Willard Gaylin, M.D. New York, Penguin Books, 1987, 271 pp., \$4.50 (paper).
- A Narrative Textbook of Psychoanalysis, by Peter L. Giovacchini, M.D. Northvale, N.J., Jason Aronson, 1987, 371 pp., no price listed.
- Cocaine: Pharmacology, Addiction, and Therapy: Advances in Alcohol and Substance Abuse, vol. 6, number 12, edited by Mark S. Gold, M.D., and Marc Galanter, M.D. New York, Haworth Press, 1987, 184 pp., \$34.95.
- Search for the Causes of Schizophrenia, edited by H. Häfner, W.F. Gattaz, and W. Janzarik. New York, Springer-Verlag, 1987, 376 pp., no price listed.
- Behavioural Treatment of Children With Problems: A Practice Manual, 2nd ed., by Martin Herbert. London, Academic Press (Harcourt Brace Jovanovich), 1987, 271 pp., \$49.95.
- Lithium Combination Treatment, edited by F. Neil Johnson. Basel, Karger, 1987, 260 pp., \$132.00.

- Memoirs, by Emil Kraepelin. New York, Springer-Verlag, 1987, 238 pp., no price listed.
- In Search of Parenthood: Coping With Infertility and High-Tech Conception, by Judith N. Lasker and Susan Borg. Boston, Beacon Press, 1987, 225 pp., \$17.95.
- Explorations in Nonverbal and Vocal Behavior, by George F. Mahl. Hillsdale, N.J., Lawrence Erlbaum Associates, 1987, 407 pp., \$49.95
- Le Sexe de la Mère et les Divergences des Théories Psychanalytiques, by Béatrice Marbeau-Cleirens. Paris, Presses Universitaires de France, 1987, 244 pp., 150 French francs (paper).
- Fears, Phobias, and Rituals: Panic, Anxiety and Their Disorders, by Isaac M. Marks, M.D., F.R.C.Psych. New York, Oxford University Press, 1987, 641 pp., no price listed.
- Conscience and Autonomy in Judaism: A Special Issue of the Journal of Psychology & Judaism, edited by Rabbi Levi Meier. New York, Human Sciences Press. 1987, 57 pp., \$9.95 (paper).
- Human Sciences Press, 1987, 57 pp., \$9.95 (paper).

 Maternal Health and Infant Survival, by C. Arden Miller, M.D. Washington, D.C., National Center for Clinical Infant Programs, 1987, 52 pp., \$6.00 (paper).
- Treating Anxiety Disorders: New Directions for Mental Health Services 32, Winter 1986, edited by Rodrigo A. Muñoz; H. Richard Lamb, Editor-in-Chief. San Francisco, Jossey-Bass, 1986, 105 pp., \$12.95 (paper).
- Dynamic Therapy in Brief Hospitalization, by John M. Oldham, M.D., and L. Mark Russakoff, M.D. Northvale, N.J., Jason Aronson, 1987, 226 pp., \$25.00.
- Positive Psychotherapy: Theory and Practice of a New Method (1977), by Nossrat Peseschkian. New York, Springer-Verlag, 1987, 435 pp., \$29.00 (paper).
- Heal or Die: Psychotherapists Confront Nuclear Annihilation, edited by Kenneth Porter, M.D., Deborah Rinzler, Ph.D., and Paul Olsen, Ph.D. New York, Psychohistory Press, 1987, 133 pp., \$21.95.
- Masculinity/Femininity: Basic Perspectives, edited by June Machover Reinisch, Ph.D., Leonard A. Rosenblum, Ph.D., and Stephanie A. Sanders, Ph.D. New York, Oxford University Press, 1987, 350 pp., \$29.95.
- Divided Staffs, Divided Selves: A Case Approach to Mental Health Ethics, by Stanley Joel Reiser, Harold J. Bursztajn, Paul S. Appelbaum, and Thomas G. Gutheil. New York, Cambridge University Press, 1987, 141 pp., \$29.95; \$8.95 (paper).
- Alcohol and the Cell: Annals of the New York Academy of Sciences, vol. 492, edited by Emanuel Rubin. New York, New York Academy of Sciences, 1987, 410 pp., no price listed (paper).
- Psychiatry Inside Out: Selected Writings of Franco Basaglia, edited by Nancy Scheper-Hughes and Anne M. Lovell; translated by Anne M. Lovell and Teresa Shtob. New York, Columbia University Press, 1987, 318 pp., \$35.00.
- Living Through Mourning: Finding Comfort and Hope When a Loved One Has Died (1986), by Harriet Sarnoff Schiff. New York, Penguin Books, 1987, 300 pp., \$6.95 (paper).
- Gift of Life: The Effect of Organ Transplantation on Individual, Family, and Societal Dynamics, by Roberta G. Simmons, Susan Klein Marine, and Richard L. Simmons. New Brunswick, N.J., Transaction Books, 1987, 511 pp., \$19.95 (paper).

 Body and Mind in Old Age and Decay, by A. Sunier. Assen, The
- Body and Mind in Old Age and Decay, by A. Sunier. Assen, The Netherlands, Van Gorcum (Wolfeboro, N.H., Longwood, distributor), 1986, 307 pp., \$25.00 (paper).
- Human Obesity: Annals of the New York Academy of Sciences, vol. 499, edited by Richard J. Wurtman and Judith J. Wurtman. New York, New York Academy of Sciences, 1987, 348 pp., no price listed (paper).



Calendar

For free listing of your organization's official annual or regional meeting, please send us the following information: sponsor, location, inclusive dates, type and number of continuing education credits (if available), and the name, address, and telephone number of the person or group to contact for more information. All notices and changes must be received no later than 120 days before the first day of the month of desired publication and should be addressed to Calendar, American Journal of Psychiatry, 1400 K St., N.W., Washington, DC 20005. Because of space limitations, only listings of meetings of the greatest interest to Journal readers will be included.

JANUARY

January 17–20, annual meeting, American Council on Education, Washington, D.C. Contact Robert H. Atwell, President, One Dupont Circle, N.W., Suite 801, Washington, DC 20036; 202-939-9300.

January 17–23, annual meeting, Southern Clinical Neurological Society, Ft. Myers, Fla. Contact Millie F. Walden, Executive Secretary, 3425 S.W. 2nd Ave., #153, Gainesville, FL 32607; 904-374-6058, 904-373-9765.

January 24–27, annual meeting, National Association of Private Psychiatric Hospitals, Phoenix, Ariz. Contact NAPPH Department of Communications, 1319 F St., N.W., #1000, Washington, DC 20004; 202-393-6700.

FEBRUARY

February 4–6, Third International Conference on Monoclonal Antibody Immunoconjugates for Cancer, San Diego. Contact Office of CME, M-017, UC San Diego School of Medicine, La Jolla, CA 92093; 619-534-3940.

February 8–12, annual meeting, American Group Psychotherapy Association, New York. Contact Marsha S. Block, Chief Executive Officer, 25 East 21st St., 6th Fl., New York, NY 10010; 212-477-2677.

February 11–16, annual meeting, American Association for the Advancement of Science, Boston. Contact Alvin W. Trivelpiece, Executive Officer, 1333 H St., N.W., Washington, DC 20005; 202-326-6400.

February 12–15, annual meeting, American Association for Geriatric Psychiatry, Los Angeles. Contact Charles A. Shamoian, M.D., President, P.O. Box 376A, Greenbelt, MD 20770; 301-220-0952.

February 17–21, annual meeting, American College of Psychiatrists, Tucson, Ariz. Contact Alice Conde Martinez, Executive Director, P.O. Box 365, Greenbelt, MD 20770; 301-345-3534.

MARCH

March 3-5, annual meeting, American Psychopathological Association, New York. Contact Lee Robins, Ph.D., President, 4940 Audubon Ave., St. Louis, MO 63110.

March 3–5, annual meeting, Society of Professors of Child Psychiatry, Scottsdale, Ariz. Contact Joseph Green, M.D., President, 3615 Wisconsin Ave., N.W., Washington, DC 20016; 202-966-7300.

March 3-6, annual meeting, American College of Physicians, New York. Contact John Ball, M.D., J.D., Executive Vice-President, 4200 Pine St., Philadelphia, PA 19104; 215-243-1200.

March 4–8, 6th World Congress of the World Association for Dynamic Psychiatry and XIX International Symposium of the German Academy for Psychoanalysis, Munich, Germany. Contact Lehr-und Forschungsinstitut für Dynamische Psychiatrie und Gruppendynamik, Wielandstr. 27/28, 1000 Berlin 15, Berlin-West, FRG; 030-881-80-50.

March 6–8, part II examinations, American Board of Psychiatry and Neurology, San Francisco. Contact Stephen C. Scheiber, M.D., Executive Secretary, ABPN, 500 Lake Cook Rd., Suite 335, Deerfield, IL 60015; 312-945-7900.

March 9–12, annual meeting, Association for Academic Psychiatry, Tampa, Fla. Contact Mary O'Loughlin, Dept. of Psychiatry, Mount Auburn Hospital, Cambridge, MA 02238; 617-492-3500, ext. 4309.

March 9–12, Sixth Annual Symposium in Forensic Psychiatry, American College of Forensic Psychiatry, Palm Springs, Calif. Contact Ed Miller, Executive Director, 26701 Quail Creek, Suite 295, Laguna Hills, CA 92656; 714-831-0236.

March 14–19, annual meeting, American Society of Clinical Hypnosis, Chicago. Contact William F. Hoffmann, Jr., Executive Vice-President, 2250 East Devon Ave., Suite 336, Des Plaines, IL 60018; 312-297-3317.

March 17, annual meeting, American Board of Medical Specialties, Chicago. Contact Donald G. Langsley, M.D., Executive Vice-President, One American Plaza, Suite 805, Evanston, IL 60201; 312-491-9091.

March 20–23, annual meeting, American Association for Counseling and Development, Chicago. Contact Patrick J. McDonough, Ed.D., Executive Director, 5999 Stevenson Ave., Alexandria, VA 22304; 703-823-9800.

March 20–23, annual meeting, American College of Mental Health Administration, Woodstock, Vt. Contact Peg Pearson, Administrative Assistant, P.O. Box 66, White River Junction, VT 05001; 802-295-9363, ext. 591.

(Continued on page A33)





The active metabolite of amitriptyline

All the efficacy of amitriptyline <u>and</u> a favorable side effect profile

Because of anticholinergic activity, PAMELOR (nortriptyline HCI) should be used with caution in patients who have glaucoma or a history of urinary retention.

Intraindications: 1) Concurrent use with a monoamine oxidase MAO) inhibitor, since hyperpyretic crises, severe convulsions, and tailties have occurred when similar tricyclic antidepressants were sed in such combinations; MAO inhibitors should be discontinued rat least two weeks before treatment with Pamelor* (nortriptyline CI) is started. 2) Hypersensitivity to Pamelor (nortriptyline HCI), oss-sensitivity with other dibenzazepines is a possibility. 3) The subtractory period after myocardial infarction.

CI) is started. 2) Hypersensitivity to Pameior (nortriptyline HCI), oss-sensitivity with other dibenzazepines is a possibility. 3) The sub-recovery period after myocardial infarction.

Iarnings: Give only under close supervision to patients with carovascular disease, because of the tendency of the drug to produce nus tachycardia and to prolong conduction time; myocardial infarcion, arrhythmia, and strokes have occurred. The antihypertensive attorn of guanethidine and similar agents may be blocked. Because of anticholinergic activity, nortriptyline should be used with great lution in patients who have glaucoma or a history of urinary retendence of the properties of the mental and/or physical abilities required for the performance of hazardous tasks, such as operating machinery or driving car; therefore, the patient should be warned accordingly. Excessive insumption of alcohol may have a potentiating effect, which may ad to the danger of increased suicidal attempts or overdosage, escially in patients with histories of emotional disturbances or licital ideation.

Jacdai (deation). See in Pregnancy — Sale use during pregnancy and lactation has not see established; therefore, in pregnant patients, nursing mothers, or omen of childbearing potential, the potential benefits must be eighed against the possible hazards.

Use in Children – Not recommended for use in children, since safety and effectiveness in the pediatric age group have not been established.

Precautions: Use in schizophrenic patients may result in an exacerbation of the psychosis or may activate latent schizophrenic symptoms: in overactive or agitated patients, increased anxiety and agitation may occur; in manic-depressive patients, symptoms of the manic phase may emerge. Administration of reserpine during therapy with a tricyclic antidepressant has been shown to produce a "stimulating" effect in some depressed patients. Troublesome patient hostility may be aroused. Epileptiform seizures may accompany administration. Close supervision and careful adjustment of dosage are required when used with other anticholinergic drugs and sympathomimetic drugs. Concurrent administration of cimeltidine can produce clinically significant increases in the plasma concentrations of the tricyclic antidepressant. Patients should be informed that the response to alcohol may be exaggerated. When essential, may be administered with electroconvulsive therapy, although the hazards may be increased. Discontinue the drug for several days, if possible, prior to elective surgery. The possibility of a suicidal attempt by a depressed patient remains after the initiation of treatment, in this regard, it is important that the least possible quantity of drug be dispensed any given time. Both elevation and lowering of blood sugar levels

Adverse Reactions: Cardiovascular—Hypotension, hypertension, lachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. Psychiatric—Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agilation, insomnia, panic, nightmares, hypomania, exacerbation of psychosis. Neurologic—Numbness, tingling, pares-

hesias of extremities, incoordination, ataxia, tremors, peripheral neuropathy, extrapyramidal symptoms, setzures, alteration in EEG patterns; tinnitus, Anticholinergic—Dry mouth and rarely, associated sublingual adentits, blurred vision, disturbance of accommodation, mydriasis, constipation, paralytic ileus, urinary refention, delayed micturition, dilation of the urinary tract. Allergic—Skin rash, petechiae, urticaria, itching, photosensilization (avoid excessive exposure to sunlight), edema (general or of face and longue), drug lever cross-sensitivity with other tricyclic drugs. Hematologic—Bonemarrow depression, including agranulocytosis, eosinophilia, purpura, thrombocytopenia. Gastrointestinal—Nausea and vomiting, anotexia, epigastric distress, diarrhea, peculiar taste, stomatitis, abdominal cramps, black-tongue. Endocrine—Gynecomastia in the male, breast enlargement and galactorrhea in the female: increased of decreased libido, impotence, lesticular swelling, elevation or depression of blood sugar levels: syndrome of inappropriate ADH (antiduretic hormone) secretion. Other—Jaundice (simulating obstructive), altered liver function, weight gain or loss, perspiration, tushing, urinary frequency, nocturia, drowsiness, dizziness, weakness, fatigue, headache; parotid swelling, alopecia. Withdrawai Symptoms—Though these are not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, readache, and malaise.

Overdosage: Toxic overdosage may result in confusion, restlessness, agitation, vomiting, hyperpyrexia, muscle rigidity, hyperactive reflexes, tachycardia. ECG evidence of impaired conduction, shock, congestive heart failure, stupor, coma, and CNS stimulation with convulsions followed by respiratory depression. Deaths have occurred with drugs of this class. No specific antidote is known, general supportive measures are indicated, with pastric lavage.



Dorsey Pharmaceuticals

SANDOZPHARMACEUTICALS

The American Psychiatric Association

1400 K Street, N.W., Washington, D.C. 20005

OFFICERS 1987-1988

President: George Pollock
President-Elect: Vice-President: Herbert Pardes
Vice-President: Allan Beigel
Secretary: Elissa P. Benedek
Treasurer: Alan Levenson

ASSEMBLY

Speaker: Irvin M. Cohen Speaker-Elect: John S. McIntyre Recorder: Dorothy A. Starr

MEDICAL DIRECTOR'S OFFICE

Medical Director: Melvin Sabshin
Deputy Medical Directors: Donald W. Hammersley

CONSTITUTIONAL COMMITTEES

Scientific and Physician-Patient

Video

Information Systems

Grants and Awards

Psychiatry

Educational Services Exhibits

Foundations' Fund Prize for Research in

Harold A. Pincus Carolyn B. Robinowitz Jeanne Spurlock

> Louis F. Rittelmeyer, Jr. Hugh James Lurie Wandal W. Winn Alan I. Levenson

> > Ira Glick

BOARD OF TRUSTEES

Robert J. Campbell III Frederick Gottlieb Lawrence Hartmann Linda Logsdon Philip M. Margolis Carol C. Nadelson Pete C. Palasota Robert O. Pasnau Douglas A. Sargent Chester W. Schmidt, Jr. John A. Talbott Hugo Van Dooren William L. Webb, Jr.

CHAIRPERSONS OF COUNCILS, COMMISSIONS, COMMITTEES, AND TASK FORCES

CONSTITUTIONAL COMMITTE	ES
Budget	Steven S. Sharfstein
Constitution and By-Laws	Leigh M. Roberts
Elections	Bernice Elkin
Ethics	William Webb, Jr.
Tellers	Boyd L. Burris
Membership	John S. McIntyre
Nominating	Robert O. Pasnau
Reference	Paul J. Fink
Resource Development	L. Douglas Lenkoski
COUNCIL ON AGING	Gene David Cohen
Nursing Homes and Elderly Mental	
Alzheimer's Disease	Eric D. Caine
Reimbursement for Elderly Mentally	noward Goldman
COUNCIL ON CHILDDEN ADOL	ECCENTTC
COUNCIL ON CHILDREN, ADOI AND THEIR FAMILIES	
, ·,, ·- · · · · · · ·	Larry B. Silver
Chronically Ill and Emotionally	
Handicapped Children	Marcelino Amaya
Confrontational Therapies	Mark Blotcky
Juvenile Justice Issues	William Buzogany
Psychiatry and Mental Health in Sch	pools Irving H. Berkovitz
Family Violence and Sexual Abuse	Sandra J. Kaplan
1	ourman je reupene
COUNCIL ON ECONOMIC AFFA	IRS Donald J. Scherl
Financing and Marketing	Howard Gurevitz
JCAH Standards for Hospital-Based	
Hospital-Related Services	Gerald H. Flamm
	Mildred Mitchell-Bateman
Interprofessional Affairs	
Social Security Income! Disability In	surance Arthur Meyerson
Prospective Payment Issues	Joseph T. English
Future Trends in Private Insurance	Robert W. Gibson
Psychiatrist Payment	Boris Astrachan
Quality Assurance	George Wilson
	~
COUNCIL ON INTERNAL	
ORGANIZATION	Ronald Shellow
Arrangements	Gilles Plante, Gaston Harnois
Scientific Program	Robert Hales
Film	Bernard Morenz
4 10///	Delliala Molenz

Manfred S. Guttmacher Award	Robert Stubblefield
Marie H. Eldredge Award	Bernice E. Coleman
Hospital and Community Psychiatry	bernice E. Coleman
Achievement Awards	Gail Barton
	Richard Rada
Isaac Ray Award	
Ittleson Award	Dennis Cantwell
Weinberg Memorial Award	Sanford Finkel
McGavin Award	Lenore F.C. Terr
Vestermark Award	Bryce Templeton
Samuel G. Hibbs Award	
Advertising	Will Strathmann
Headquarters	Raymond I. Band
Member Life, Accident, and Health	•
Insurance	Harvey Bluestone
Special Benefit Programs	Abram M. Hostetter
Personnel	William Sorum
Advertisers and Exhibitors	Henry H. Work
Telemedical Services	Jane Preston
History and Library	Lucy Ozarin
Exhibits Advisory	Joseph B. Honnigford
Friends of the APA	Cynthia Rose
PIA Foundation Hospital Research Awards	H. Richard Lamb
COUNCIL ON INTERNATIONAL	
A EDAID C	Harald M. Vincesley

COUNCIL ON INTERNATIONAL AFFAIRS Abuse and Misuse of Psychiatry and Psychiatrists Inter-American Council Liaison Human Rights Problems of Americans Overseas Psychosocial Aspects of the Middle East Process International Education Joint Meeting in China World Psychiatric Association Regional Symposium in 1988 Terrorism Harold M. Visotsky Michael R. Zales Evaristo Gomez Lawrence Hartmann Eric Plaut George Tarjan Normund Wong Herbert Pardes Robert Hales Louis J. West

COUNCIL ON MEDICAL EDUCATION AND CAREER DEVELOPMENT Administrative Psychiatry Medical Student Education	Robert L. Williams Stephen L. Rachlin Gerald A. Melchiode
Graduate Education	Stefan Stein
Continuing Education Consultation-Liaison Psychiatry and Primary Care Education	John W. Goethe
Primary Cara Education	Troy I Thompson
Intraired Physician	Troy L. Thompson Stephen Scheiber
Impaired Physician Communication Between APA and ABPN	Richard I. Shader
Communication between ALA and ADEN	Richard I. Shader

Recertification
Independent Study
PKSAP-VI
Residents
APA/Burroughs Wellcome Fellowship
APA/Mead Johnson Fellowship
Minority Fellowship Program
Psychiatric Leadership in Public Mental
Health Programs
Cost Effectiveness in ConsultationLiaison Psychiatry

COUNCIL ON NATIONAL AFFAIRS
Abuse and Misuse of Psychiatry in U.S.
Asian-American Psychiatrists
Black Psychiatrists
American Indian and Alaskan
Native Psychiatrists
Foreign Medical Graduates
Religion and Psychiatry
Hispanic Psychiatry
Hispanic Psychiatrists
Women
Gay, Lesbian, and Bisexual Issues
Occupational Psychiatry
Psychiatric Aspects of AIDS
Psychological Aspects of Nuclear Arms
Development
Victimization

COUNCIL ON PSYCHIATRIC SERVICES
Federal Government Health Services
Alcoholism
Drug Abuse
Rehabilitation
State Mental Health Systems
American Hospital Association
Functions of the Hospital and Community
Psychiatry Service, Journal, and Institute
Commission on Professional and Hospital
Activities
Institute on Hospital and Community
Psychiatry Program
Chronically Mentally Ill

Herbert Pardes Ian Alger Gordon Darrow Strauss Phyllis Amabile Walter E. Barton James T. Barter Charles Pinderhughes Steven Edward Katz

Frederick G. Guggenheim

Pedro Ruiz
Roger Dale Walker
Joyce S. Kobayashi
Thelissa A. Harris

Linda Cross
S. Arshad Husain
Marc Galanter
Gladys Egri
Nada Logan Stotland
James Paul Krajeski
Duane Q. Hagen
Stuart E. Nichols, Jr.

Judith E. Lipton Martin Symonds

Naomi Goldstein William B. Hunter Richard J. Frances Edward Kaufman Arthur T. Meyerson Ernest Klatte Mark Gould

H. Richard Lamb

Henry Pinsker

Stuart L. Keill David Cutler Private Practice Jails and Prisons Psychiatric Services in the Military Practice of Psychotherapy Practice Issues in Organized/Managed Care

COUNCIL ON PSYCHIATRY AND LAW Confidentiality

COUNCIL ON RESEARCH
Use of Laboratory Tests in Psychiatry
Safety and Performance Standards for
Electroconvulsive Therapy Devices
Long-Term Effects of Lithium on Kidney
Sudden Death
Treatments of Psychiatric Disorders
Tardive Dyskinesia
Psychosocial Treatment Research
Biographical Directory
Benzodiazepine Dependency
Psychiatric Diagnosis and Assessment
Research on Psychiatric Treatments

COMMISSION ON JUDICIAL ACTION

CONSULTATION SERVICES BOARD

ETHICS APPEALS BOARD

JOINT COMMISSION ON PUBLIC AFFAIRS

JOINT COMMISSION ON GOVERNMENT RELATIONS

SPECIAL COMPONENTS
Investment Advisory Committee
Long-Range Planning Committee
Executive Compensation Committee
Work Group on Federal Government
Organizational Structure
Conference on Future of Psychiatry
Liaison With PRMS, Inc.

James Margolis Henry Weinstein Leonora K. Petty Marcia Kraft Goin Haroutun Babigian

Howard V. Zonana Aron S. Wolf

Herbert Pardes Alexander Glassman

Richard D. Weiner George R. Heninger George M. Simpson T. Byram Karasu John Michael Kane John P. Docherty David J. Knesper Carl Salzman Allen J. Frances John M. Kane

Paul Appelbaum

Dave M. Davis

Elissa P. Benedek

Harvey L. Ruben

John J. McGrath

Frederick Amling John A. Talbott Robert J. Campbell III

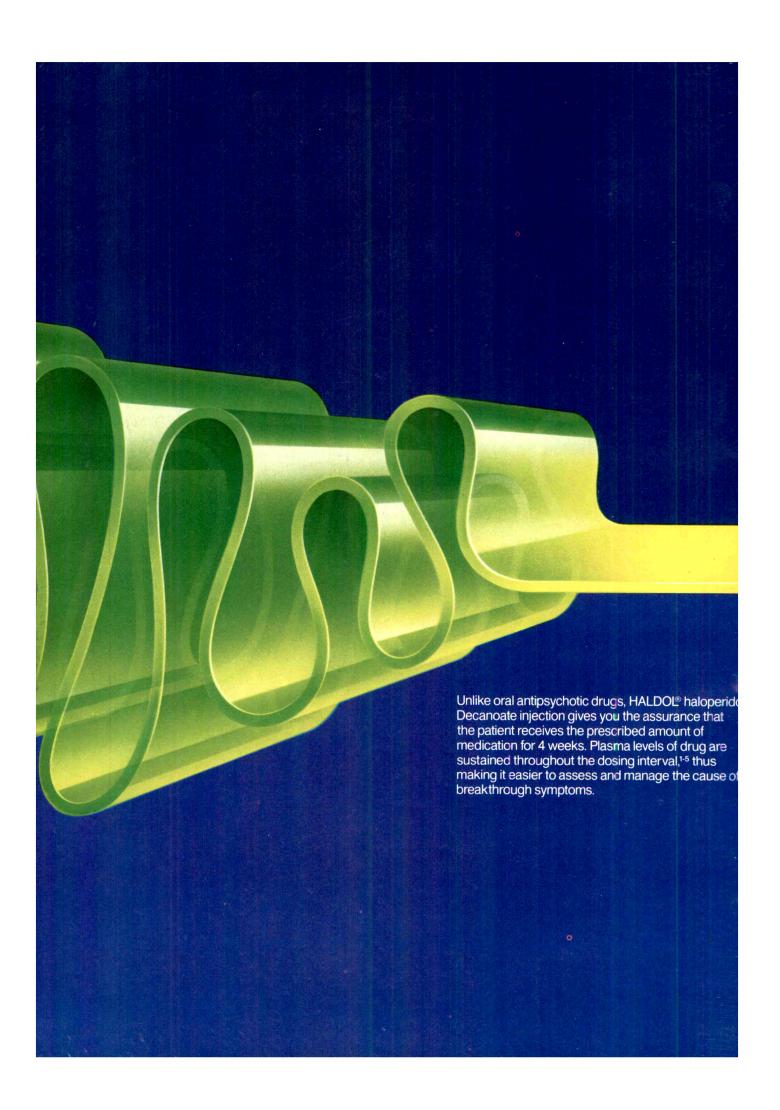
Daniel X. Freedman John A. Talbott Alan Levenson

Coming in the December 1987 issue of

THE AMERICAN JOURNAL OF PSYCHIATRY

Elements of the Private Therapeutic Interview
By Norman E. Zinberg

A Critical Discussion of DSM-III Dysthymic Disorder By James H. Kocsis and Allen J. Frances



Sustained drug levels with a single monthly dose

HALDOL DECANOATE (HALOPERIDOL) INJECTION

the therapeutic constant in schizophrenia

Pharmacokinetic profile facilitates monthly dosing

Smooth, steady drug delivery has been shown to achieve efficacy equal to oral HALDOL, but at lower monthly doses. 1 The plasma concentrations of naloperidol gradually rise, reaching a peak at about 6 days after the injection, and falling thereafter, with an apparent half-life of about 3 weeks.

The side effects of HALDOL Decanoate are those of HALDOL. The prolonged action of HALDOL Decanoate should be considered in the management of side effects. During dose adjustment or episodes of exacerbation of psychotic symptoms, HALDOL Decanoate therapy can be supplemented with short-acting forms of HALDOL. It is recommended that patients being considered for HALDOL Decanoate therapy have, at some time, been treated with, and have tolerated well, short-acting HALDOL in order to exclude the possibility of unexpected adverse sensitivity to haloperidol. HALDOL Decanoate is administered only by deep intramuscular injection.

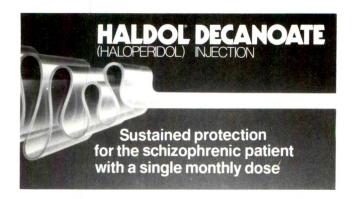
Offers sustained protection against schizophrenic relapse

Dependable delivery with HALDOL Decanoate helps provide protection for your patient to withstand the demands of daily life.

- References
 Nair NPV, Suranyi-Cadotte B, Schwartz G, et al: A clinical trial comparing intramuscular haloperidol decanoate and oral haloperidol in chronic schizophrenic patients: Efficacy, safety, and dosage equivalence. J Clin Psychopharmacol 1986;6(No. 1, Suppl.):305-37S.
 Reyntjens AJM, Heykants JJP, Woestenborghs RJH, et al: Pharmacokinetics of haloperidol decanoate. Int Pharmacopsychiatry 1982;17:238-246.
 Deberdt R, Elens P, Berghmans W, et al: Intramuscular haloperidol decanoate for neuroleptic maintenance therapy. Efficacy, dosage schedule and plasma levels. An open multicenter study. Acta Psychiatr Scand 1980;62:356-363.
 Kissling W, Möller HJ, Walter K, et al: Double-blind comparison of haloperidol decanoate and fluphenazine decanoate. Effectiveness, side-effects, dosage and serum levels during a six months' treatment for relapse prevention. Pharmacopsychiatry 1985;18:240-245.
 Roose K: Haloperidol decanoate as a replacement for maintenance therapy with intramuscular fluphenazine decanoate in schizophrenia and other chronic psychoses. Acta Psychiatr Belg 1982;82:216-223.
 Nayak RK, Doose DR, Nair NPV. The bioavailability and pharmacokinetics of oral and depot intramuscular haloperidol in schizophrenic patients (Submitted for publication).

Please see brief summary of prescribing information on next page





The following is a brief summary only. Before prescribing, see complete prescribing information in HALDOL and HALDOL Decanoate product labeling.

Contraindications: Since the pharmacologic and clinical actions of HALDOL (haloperidol) Decanoate are attributed to HALDOL as the active medication, Contraindications, Warnings, and additional information are those of HALDOL. Some sections have been modified to reflect the prolonged action of HALDOL Decanoate.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

Warnings: Tardive Dyskinesia: Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with antipsychotic drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of antipsychotic treatment, which patients are likely to develop the syndrome. Whether artipsychotic drug products differ in their potential to cause tardive dyskinesia is unknown. Both the risk of developing tardive dyskinesia and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of antipsychotic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses. There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if antipsychotic treatment is withdrawn. Antipsychotic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown. Given these considerations, antipsychotic drugs should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic antipsychotic treatment should generally be reserved for patients who suffer from a chronic illness that 1) is known to respond to antipsychotic drugs, and 2) for whom alternative, equally effective, but potentially less harmful treatments are not available or appropriate. In patients who do require reatment despite the pres

Usage in Pregnancy: (see PRECAUTIONS - Usage in Pregnancy) Combined Use With Lithium: (see PRECAUTIONS - Drug Interactions).

General: Bronchopneumonia, sometimes fatal, has followed use of antipsychotic drugs, including haloperidol. Prompt remedial therapy should be instituted if dehydration, hemoconcentration or reduced pulmonary ventilation occur, especially in the elderly. Decreased serum cholesterol and/or cutaneous and ocular changes have been reported with chemically-related drugs, although not with haloperidol. See PRECAUTIONS - Information for Patients for information on mental and/or physical abilities and on concomitant use with other substances.

Precautions: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of transient hypotension and/or precipitation of anginal pain (if a vasopressor is required, epinephrine should not be used since HALDOL may block its vasopressor activity and paradoxical further lowering of blood pressure may occur; metaraminol, phenylephrine or norepinephrine should be used; (2) receiving anticonvulsant medications, with a history of seizures, or with EEG abnormalities, because HALDOL may lower the convulsive threshold. If indicated, adequate anticonvulsant therapy should be concomitantly maintained; (3) with known allergies or a history of allergic reactions to drugs; (4) receiving anticoagulants, since an isolated instance of interference occurred with the effects of one anticoagulant (phenindione). Concomitant antiparkinson medication, if required, may have to be continued after HALDOL is discontinued because of different excretion rates; if both are discontinued simultaneously, extrapyramidal symptoms may occur. Intraocular pressure may increase when anticholinergic drugs, including antiparkinson drugs, are administered concomitantly with HALDOL. When HALDOL is used for mania in bipolar disorders, there may be a rapid mood swing to depression. Severe neurotoxicity may occur in patients with thyrotoxicosis receiving antipsyc

allergic-type reactions (including bronchial asthma) in certain susceptible individuals, especially in those who have aspirin hypersensitivity.
Information for Patients: Mental and/or physical abilities required for hazardous tasks or driving may be impaired. Alcohol should be avoided due to possible additive effects and hypotension.
Drug Interactions: Patients receiving lithium plus haloperidol should be monitored closely for early evidence of neurological toxicity and treatment discontinued promptly if such signs appear.
As with other antipsychotic agents, it should be noted that HALDOL may be capable of potentiating CNS depressants such as anesthetics, opiates, and alcohol.
Carcinogenesis, Mutagenesis and Impairment of Fertility: No mutagenic potential of haloperidol decanoate was found in the Ames Salmonella microsomal activation assay.
Carcinogenicity studies using oral haloperidol were conducted in Wistar rats (dosed at up to 5 mg/kg daily for 24 months) and in Albino Swiss mice (dosed at up to 5 mg/kg daily for 18 months).
In the rat study survival was less than optimal in all dose groups, reducing the number of rats at risk for developing tumors. However, although a relatively greater number of rats survived to the end of the study in high dose male and female groups, these animals did not have a greater incidence of tumors than control animals. Therefore, although not optimal, this study does suggest the absence of a haloperidol related increase in the incidence of neoplasia in rats at doses up to 20 times the usual daily human dose for chronic or resistant patients. In female mice at 5 and 20 times the highest initial daily dose for chronic or resistant patients. In female mice at 5 and 20 times the laghant initial daily significant increase in pitulary gland neoplasia. In male mice, no statistically significant increase in pitulary gland neoplasia. In male mice, no statistically significant increase in pitulary gland neoplasia. In male mice, no statistically significant increase in pitulary gla

noted. Antipsychotic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent *in vitro*, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of antipsychotic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis: the available evidence is considered too limited to be conclusive at this time. Usage in Pregnancy: Pregnancy Category C. Safe use in pregnancy or in women likely to become pregnant has not been established; use only if benefit clearly justifies potential hazards to the fetus.

Nursing Mothers: Infants should not be nursed during drug treatment.

Pediatric Usa: Controlled trials to establish the safety and effectiveness of intramuscular administration in children have not been conducted.

Nursing Mothers: Infants should not be nursed during drug treatment.

Pediatric Use: Controlled trials to establish the safety and effectiveness of intramuscular administration in children have not been conducted.

Adverse Reactions: Adverse reactions following the administration of HALDOL, final poperation of the provided of the conduction of the provided of the conductive of the conduc

IMPORTANT: Full directions for use should be read before HALDOL or HALDOL Decanoate is

administered or prescribed. For information on symptoms and treatment of overdosage, see full prescribing informa-

The short-acting HALDOL injectable form is intended only for acutely agitated psychotic stients with moderately severe to very severe symptoms.

6/3/87



Calendar

(Continued from page A26)

March 24–25, Fourth National Traumatic Brain Injury Symposium, Maryland Institute for Emergency Medical Services Systems, Baltimore. Contact Roberta Schwartz, M.Ed., CCC/SLP, Director, Speech-Communication Disorders Program, MIEMSS, 22 S. Greene St., Baltimore, MD 21201; 301-328-6101.

March 24–26, annual meeting, American Psychosomatic Society, Inc., Toronto. Contact George K. Degnon, Executive Director, 1311A Dolley Madison Blvd., McLean, VA 22101; 703-556-9222.

March 25–27, annual meeting, Association for Child Psychoanalysis, New Orleans. Contact Robert L. Tyson, M.D., President, 6901 Meade St., Pittsburgh, PA 15208; 412-363-0636.

March 27–31, annual meeting, American Orthopsychiatric Association, San Francisco. Contact ORTHO, 19 West 44th St., Suite 1616, New York, NY 10036; 212-354-5770.

March 28-31, 1st International Congress, The Current Status of Treatment in Child and Adolescent Psychiatry—An Update for Clinical Practice, Vienna. Contact Congress Team International (UK) Ltd., 30 Deane Way, Ruislip, Middlesex, HA4 8SX, England; 01-206-0426; Telex 923062.

March 30-April 2, annual meeting, National Council of Community Mental Health Centers, Boston. Contact Frank H. Bailey, Executive Director, 6101 Montrose Rd., Suite 360, Rockville, MD 20852; 301-984-6200.

APRIL

April 6–8, 29th National Student Research Forum, University of Texas Medical Branch, Galveston, Tex. Contact National Student Research Forum, P.O. Box 54–Station 1, UTMB, Galveston, TX 77550; 409-761-3762.

April 13–16, annual meeting, National Council on the Aging, Inc., Washington, D.C. Contact Ruth Blank, Conference and Special Events, 600 Maryland Ave., S.W., West Wing 100, Washington, DC 20024; 202-479-1200.

April 13–17, annual meeting, American Association of Suicidology, Washington, D.C. Contact Julie Perlman, M.S.W., Executive Officer, 2459 South Ash, Denver, CO 80222; 303-692-0985.

April 14-16, annual meeting, Group for the Advancement of Psychiatry, White Plains, N.Y. Contact Jerry M. Lewis,

M.D., President, P.O. Box 330, Greenbelt, MD 20770; 301-345-8030.

April 16, annual meeting, Bulimia Anorexia Self Help, Inc., St. Louis. Contact Felix E.F. Larocca, M.D., Pres dent, 6125 Clayton Ave., Suite 215, St. Louis, MO 63139: 314-567-4080.

April 17–20, annual meeting, American Occupat onal Therapy Association, Phoenix, Ariz. Contact Executive Director, 1383 Piccard Dr., Rockville, MD 20850; 301-9-8-9626.

April 17–23, annual meeting, American Academy of Neurology, Cincinnati. Contact AAN, 2221 University Ave., S.E., Suite 335, Minneapolis, MN 55414; 612-623-8 15.

April 21–24, 19th Annual Medical-Scientific Conference, American Medical Society on Alcoholism & Other Drug Dependencies, Washington, D.C. Contact Claire Osman, AMSAODD Administrative Director, 12 West 21 st St., New York, NY 10010; 212-206-6770.

April 21–25, annual meeting, National Council on Alcoholism, Inc., Washington, D.C. Contact Thomas V. Seesel, Executive Director, 12 West 21st St., 7th Fl., Nev. York, NY 10010; 212-206-6770.

April 23–29, annual meeting, American Occupat onal Medical Association, New Orleans. Contact Donald L. Hoops, Ph.D., Executive Director, 2340 S. Arlington Feights Rd., Suite 400, Arlington Heights, IL 60005; 312-223-6850.

April 26–30, annual meeting, Society of Behav oral Medicine, Boston. Contact Judith C. Woodward, Executive Director, P.O. Box 8530, Knoxville, TN 37996; 615-374-5164.

April 27—May 1, annual meeting, American As ociation of Sex Educators, Counselors and Therapists, Sar Francisco. Contact Ruth Hunt, Ph.D., Executive Director, 11 Dupont Circle, N.W., Suite 220, Washington, DC 2003c; 202-462-1171.

April 28–30, First International Congress Asiar Pacific Region, Reflections on Mental Health, Sydney, Australia. Contact Congress Secretariat, P.O. Box 11, Torrens. Canberra, 2607, Australia; 062-86-1588.

April 28-May 1, annual meeting, American As ociation of Pastoral Counselors, Portland, Ore. Contact James W. Ewing, Ph.D., Executive Director, 9508 A Lee Hwy., Fairfax, VA 22031; 703-385-6967.



ECONOMICS SCIENTIFIC JOURNALS

"This publication is an in-depth source for anyone who wants to learn about the inner workings of scientific journal publishing. Although it deals mostly with society, not-for-profit publishing, it provides the reader with the general philosophy and methods used by most commercial publishers as well."

--Society for Scholarly Publishing Letter

CONTENTS: Member Subscriptions • Single Issues and Back Volumes • Reprints • Advertising in Scholarly Journals • Page Charges • Journal Income: a Multipublisher's View • Editorial Operations • Copy Editing • Purchasing Typesetting Separately from Printing • Presswork, Binding, and Paper • Distribution and Postage • Subscription Fulfillment • Budgeting, Accounting, and Financial Planning • Marketing the Scientific Journal • Subject Index

Paperbound; ISBN: 0-914340-03-4; Publication date: December 1982; Trim size: 6×9 inches; 106 pages

Regular Price: \$11.95 (10% discount on 10 or more copies delivered to one address)

CBE Member Discount Price: \$10.75 (single copy paid by personal check)

Terms of Sale: All sales final; no returns.

Prepayment required; U.S. currency drawn on a U.S. bank.

Price includes BOOK RATE postage.

For faster delivery--first class, air mail, or UPS available at additional charge (book weight 8.5 oz).

Maryland residents, please add 5% sales tax.

COUNCIL OF BIOLOGY EDITORS, INC. 9650 Rockville Pike, Bethesda, MD 20814

The American Psychiatric Association and the Chinese Medical Association invite you to participate in a state of the art conference on scientific progress and collaboration in psychiatry.

August 14-18, 1988 Beijing, People's Republic of China

AMERICAN TASK FORCE:

Herbert Pardes, M.D., Chair Lawrence Hartmann, M.D. Roger Meyer, M.D.

CONTINUING MEDICAL EDUCATION CREDITS WILL BE OFFERED.

Travel packages will be arranged with options for extended trips outside of China through an APA-designated travel agent. Travel inside China will be arranged by the Chinese Medical Association.

For further information, please write to:

Office of International Affairs American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005 Phone: 202-682-6286

LIBRIUM®

chlordiazepoxide HCl/Roche (V mg, 10-mg, 25-mg capsules Sefore prescribing, please consult complete product information, a summary of which follows: Indications: Management of anxiety disorders; short-term relief of anxiety symptoms, acute alcohol withdrawal symptoms, preoperative apprehension and anxiety. Usually not required for anxiety or tension associated with stress of everyday life. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Known hypersensitivity to the

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms (including convulsions) reported after abrupt cessation of extended use of excessive doses are similar to those seen with barbiturates. Milder symptoms reported infrequently when continuous therapy is abruptly nded. Avoid abrupt discontinuation; gradually taper dosage

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do

become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmaco logic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychictric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tenden-cies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically. Due to isolated reports of exacerbation, use with caution

in patients with porphyria. Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few Instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido-all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), igundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy. **Usual Daily Dosage:** Individualize for maximum beneficial effects Oral—Adults: Mild and moderate anxiety disorders and symptoms, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCI/Roche)
Capsules, 5 mg, 10 mg and 25 mg—bottles of 100
and 500; Tel-E-Dose® packages of 100, available in
boxes of 4 reverse-numbered cards of 25, and in boxes containing 10 strips of 10. Libritabs® (chlordiazepoxide/Roche) Tablets, 5 mg and 10 mg bottles of 100 and 500; 25 mg—bottles of 100. With respect to clinical activity, capsules and tablets are indistinguishable.



Do not substitute Librard of

chlordiazepoxide HCI/Roche (V)







Nobody does it better.













Cocaine. It's one of the worst of America's fast growing problems with drug abuse. Many people who are out for kicks quickly turn into addicts.

Charter's latest Medical Review enables you to learn from some of the most distinguished minds, the best current thinking in dealing with the matter of cocaine, including the most dangerous and addictive form of cocaine: "crack."

Our seventh taped symposium focuses on the work of four outstanding doctors. Together they discuss the

problems and methods of treating patients suffering fro cocaine addiction.

Based on extensive nationwide research among psychiat the Charter Medical Review™ is brought to you in the inte

Robert O. Friedel, M.D.

Moderator Vice President Vice President

-Psychiatric Medicine,
Charier Medical
Corperation;
Medical Director,
Charier Westbrook
Hospital, Richmond, VA.

Herbert D. Kleber, M.D. Professor of Psychiatrs, Yale University School of Medicine; Director, Substance Abuse Treatment Unix, Connecticut Mental Health Center, New Haven, CT.

Roger D. Weiss M.D.

Assistant Professor of Psychiatry, Harvard Medical School; Director, Alcohol and Brug Abuse Treatment Center, McLean Hospital, Belmont, MA.

Everett H.
Ellinwood, Jr., M.E.
Professor of Psychiatry &
Pharmacology:
Director, Behavioral
Neuropsychopharmacology Section, Department of Psychiatry, Duk
University Medical Cent
Durham, NC.



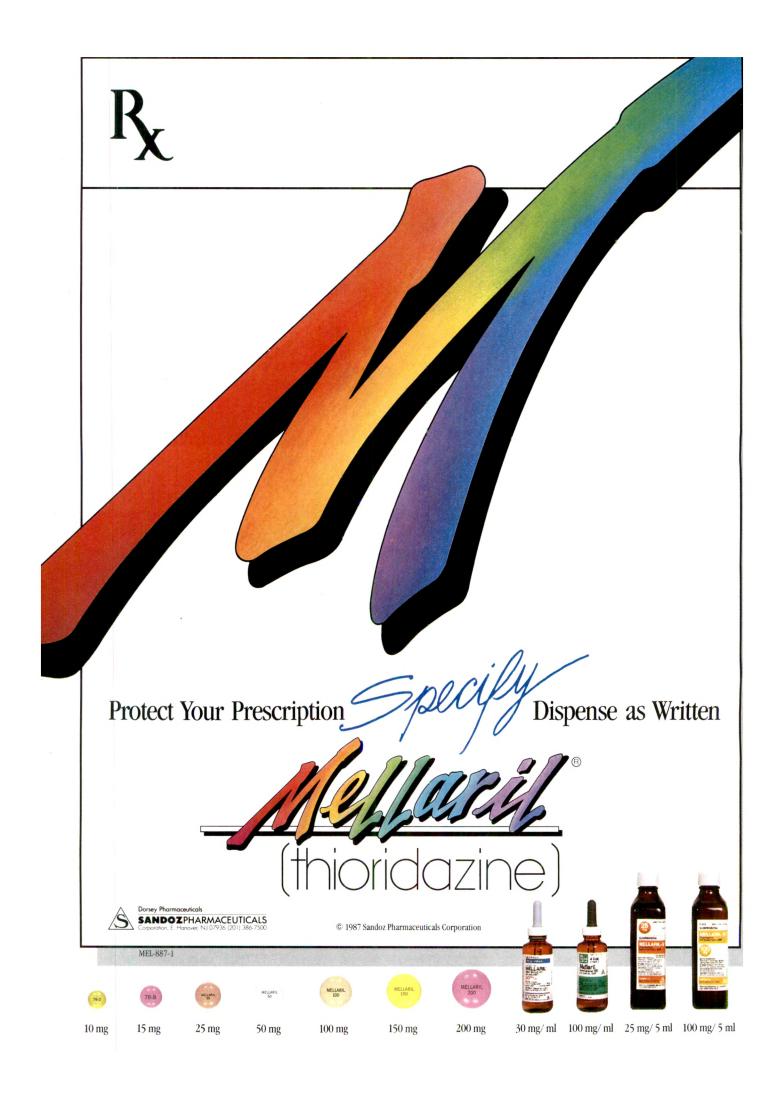
er Matter.

nhancing the understanding of important topics in clinical hiatry for the benefit of physicians and patients alike. redit earned from listening to these tapes may be med in Category II of the Physicians Recognition ard of the AMA and Category II of the CME requirent of the APA.

mply fill out the coupon and we'll send you the rter Medical Review™ audio cassette and tranption summary with our compliments.
we work together this cold craving can be aced by meaningful, spirited lives.

CHARTER MEDICAL

The Charter M	Medical Review™ ay/Norcross, Georgia	7AN 30071
Name Specialty: Psychiatry Beauty Psychology S	ocial Work	
Address	Ot	her
City	State Zip)



Can Antidepressants Cause Mania and Worsen the Course of Affective Illness?

Thomas A. Wehr, M.D., and Frederick K. Goodwin, M.D.

Several investigators have recently challenged the belief that antidepressants can precipitate mania or rapid cycling between mania and depression. With one exception, there appear to be no placebocontrolled studies of switches into mania in bipolar patients during antidepressant treatment. Patients most likely to switch into mania during antidepressant therapy have probably been excluded from maintenance treatment studies and are probably overrepresented in studies at special research facilities. On balance, the available evidence suggests that some bipolar patients become manic, and a few experience rapid cycling, when they are treated with antidepressants. The prevention of these responses will require further research on risk factors and on the antimanic efficacy of coadministered lithium or other mood stabilizers.

(Am J Psychiatry 1987; 144:1403-1411)

The physician must be particularly careful not to go to extremes . . . he may overexcite the patient whose prevailing mood is melancholic . . . a ruthless excitation feeds the tendency to rage which is associated with the disease.

—J.C. Heinroth (1818)

The treatment of affective disorders was revolutionized in the late 1950s by the advent of antidepressant medications, and the efficacy of these drugs has been well documented in the years since their introduction. During the same period, however, reports have regularly appeared indicating that these drugs

might adversely affect the course of illness in a significant number of patients. The drugs have been reported 1) to precipitate mania or hypomania in bipolar and unipolar patients (1–24), 2) to increase the frequency of recurrences of affective episodes (14, 15, 25–37), and 3) to increase the tendency for the illness to take a circular course in which mania alternates with depression (14, 15, 21, 28–38). However, some investigators known for their work in this area currently are challenging these claims. In this paper we review the evidence pertaining to the controversy, suggest guidelines for the clinical use of antidepressants, and recommend directions for future research.

THE CONTROVERSY

Many clinicians believe that antidepressarts are capable of inducing mania in bipolar patients: however, some investigators reject this view. For example, Lewis and Winokur (39) concluded on the bas 5 of a retrospective chart review "that the so-called switch effect due to tricyclic antidepressants reported in the past probably represents random manifestations of bipolar illness" and "is not greater than what one would expect from the natural history of the illness itself." In another type of retrospective study Angst (40) reviewed patterns of admissions to a Swiss psychiatric hospital from 1920 to 1982 and concluded that after the introduction of antidepressants ir 1958 there was "no significant increase in switches of unipolar or bipolar patients" and that there was "no evidence for a treatment-induced switch." Quitkin et al. (23) studied the effects of prophylactic lithiur with and without imipramine in bipolar patients and concluded that "there was little evidence that the combination of lithium carbonate and imipramine caused adverse reactions." Commenting on a recent National Institute of Mental Health (NIMH) collaborative study of drug prevention of recurrent affective disor-

The authors thank Jeffrey Sherwin for technical assistance in the preparation of this manuscript.

Received Aug. 11, 1986; revised March 11, 1987; accepted May 7, 1987. From the Intramural Research Program, NIMH. Address reprint requests to Dr. Wehr, Intramural Research Program, NIMH, Bldg. 10, Rm. 4s-239, 9000 Rockville Pike, Bethesda, MD 20892.

der, Prien et al. (41) were more cautious in their conclusions. They found a "high incidence of manic recurrences for imipramine-treated bipolar patients" but, because there was no placebo-treated group, they were unable "to determine if the high incidence of manic recurrences for imipramine-treated patients resulted from imipramine-induced mania or from failure of imipramine to prevent naturally occurring manic episodes." They suggested, however, that the fact that an earlier Veterans Administration (VA)-NIMH study showed "no major difference between imipramine and placebo in the incidence of mania provides support for the latter interpretation."

THE EVIDENCE

The current controversy about the capacity of antidepressants to induce mania seems ironic when one considers that reports of mania-like responses in medical patients treated with these drugs led to their use as antidepressants in the first place (42). Over the years there have been numerous reports that these drugs can cause mania, and the belief that they do is reflected in warnings routinely published in drug package inserts, the Physicians' Desk Reference, textbooks, and scholarly reviews. Intuitively it seems to make sense that a treatment which lifts patients out of depression could cause an overshot into mania. Indeed, two other antidepressant modalities, ECT and sleep deprivation, have been reported to cause manic or hypomanic symptoms in the majority of depressed bipolar patients treated with these procedures (43-45). Psychostimulants, such as amphetamine and cocaine, and certain monoamine-oxidase inhibitor (MAOI) antidepressants (46, 47) produce mania-like symptoms even in normal individuals. Therefore, it seems plausible that moodelevating antidepressant drugs could cause mania in affective patients who may be especially vulnerable to mood shifts. Nevertheless, in light of the current uncertainty about drug-induced switches, it is useful to reexamine the empirical basis of this belief.

Studies of the effects of antidepressants on the course of affective illness generally can be divided into the following three categories.

- 1. Many studies have been designed to evaluate patients' responses to the acute treatment of a depressive episode during a period of a few weeks (1–13, 17–21), and some of these studies have included a more extended period of continuation therapy. There are several problems with these studies. They were conducted at a time when it was not yet customary to evaluate bipolar patients separately from unipolar patients; they were designed to evaluate antidepressant response rates, not the occurrence of mania; and statistics about the occurrence of mania may be unreliable because observations of mania were often made in an unsystematic fashion.
- 2. A few studies, designed to investigate the capacity of maintenance treatment to prevent affective re-

currences, have focused on the percentage of patients who relapse during a 2-year period (16, 22, 41). The period of observation usually began after successful treatment of an index affective episode, when maintenance treatment was initiated, and it effectively ended when patients relapsed. A major problem with this type of study is that the patients who are most at risk for adverse responses to antidepressants have been systematically excluded from the studies by a requirement that patients become stabilized during acute treatment of the index episode before entering the study.

3. A third type of study resembles the second, except that investigators have extended their observations beyond the first relapse and recorded all subsequent relapses in order to determine their frequency (14, 15, 25–38). In general, these have been nonblind, uncontrolled, naturalistic studies that have compared patients' course of illness before and after the introduction of antidepressant treatment. Thus, the impact of antidepressants cannot be disentangled from spontaneous increases in the frequency of episodes that are reported to be characteristic of the natural course of the illness (48, 49). A second problem is that many of these studies are partly retrospective. In these cases, effects of drugs are often confounded with possible effects of a shift from retrospective to prospective observations.

Finally, in evaluating these studies it is important to discriminate between mania and hypomania. Mania occurring during the course of antidepressant treatment is often a serious problem; hypomania, on the other hand, if not unduly prolonged, presents few difficulties and may even be desirable in some cases.

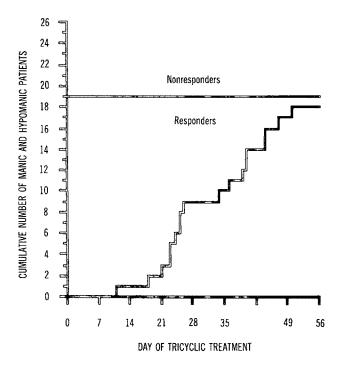
DO ANTIDEPRESSANTS PRECIPITATE MANIA?

Acute Treatment of Depression in Bipolar Patients

Surprisingly, to our knowledge there have been no placebo-controlled studies (with adequate numbers of subjects) of the acute antidepressant treatment of depressed bipolar patients. Early studies included small numbers of bipolar patients, but their responses were not analyzed separately. Later, when it became customary to separate bipolar patients from unipolar patients, the former were excluded from the studies, perhaps because of the belief that they would react adversely to antidepressants.

Mania occurs very frequently in bipolar patients undergoing longitudinal, double-blind trials of antidepressants. For example, of 26 patients treated with tricyclic antidepressants, Wehr and Goodwin (21) found that 18 of 19 who responded became manic (N=8) or hypomanic (N=10), according to systematic criteria based on daily ratings. These results are in agreement with those of Himmelhoch et al. (24), who found that 100% of depressed bipolar patients who responded to tricyclic antidepressants became manic,

FIGURE 1. Cumulative Onset of Mania (N=8) and Hypomania (N=10) in 26 Depressed Bipolar Patients Treated With Tricyclic Antidepressants $^{\rm a}$



^aData from Wehr and Goodwin (21). With few exceptions, manic responses occurred earlier in the course of treatment than hypomanic ones.

and Murphy et al. (17), who found that 50% of depressed bipolar patients who were treated with phenelzine (all of the responders) became manic. In the Wehr and Goodwin study the latency of the switch from depression to mania during drug treatment was similar to the usual latency of the antidepressant effect, and it may therefore indicate that the occurrence of mania was a consequence of the antidepressant effect of the drugs (see figure 1). Akiskal (22) reported that antidepressants induced hypomania in 44% of patients with cyclothymic personalities; before treatment 22% had experienced manic or hypomanic episodes. Although some of these studies did attempt to compare the switch rate during the tricyclic period with that during the pretricyclic period in each patient, they did not include random assignment to a placebo group. Thus, the issue of spontaneous switches in these bipolar patients cannot be completely resolved. Another problem is that most of the studies were done at tertiary treatment centers, to which patients are often referred precisely because they respond adversely to standard treatments; therefore, the patients who participated in these studies may have been unusually susceptible to drug-induced mania and may not be representative of typical cases.

Controversy about antidepressant-induced mania was sparked by the publication in 1982 of Lewis and Winokur's negative results of a chart review of bipolar patients' responses to acute and continuation treatment with antidepressants (39). In this uncont olled, retrospective study, they examined hospital adm ssions of bipolar patients and found that those who received tricyclic antidepressants did not switch into mania more frequently (25%) than those who received no medication (41%). Fundamental problems with the design and methods of the study, however, cast doubt on the validity of this finding. The number of subjects was small; only eight patients were treated with tricyclics alone. Of more importance, powerful distortions may have been introduced by the criteria used to select patients for the study. Those whose previous manias were drug induced, a group that might be expected to show frequent switches into mania during treatment with tricyclics, were systematically excluded. Furthermore, patients were not randomly assigned to di terent treatments but received those chosen by their physicians. Patient characteristics that were responsible for these treatment decisions could have resulted ir selection biases that might explain the high num er of switches in the no-treatment group. For example, 45% of the no-treatment patients who switched into mania had been depressed. Why did their physicians decide not to treat them? Was treatment withheld ir some cases because the patients were already beginting to switch out of depression into mania? Unequal distribution of the sexes in the groups may have hiased against finding more switches into mania in the tricyclic group. In the patient group as a whole, women were twice as likely to switch into mania a men (consistent with our data [21, 37] and the results of Quitkin et al. [23]), but the ratio of women to min was twice as high in the no-treatment group as in the tricyclic group. Finally, of the no-treatment patients who switched into mania, the majority had not been depressed on admission; instead, they had othe diagnoses such as personality disorder (27%) that could indicate misdiagnosed impending mania or pharmacologic (9%) or organic (9%) factors predisposing to mania. All of these factors would tend to inflate the number of switches in the no-treatment group.

Angst (40) has approached the problem of antidepressant-induced mania in a unique way. He examined records of patients admitted to the Burghölzli Psychiatric Hospital in Zurich, Switzerland, over the six decades from 1920 to 1982 and hypothesized that any effects of antidepressants on affective illness would be reflected in changes in the prevalence and course of affective episodes during the different decades of this century. Historically, the surrounding area from which the hospital draws its patients has been spared from wars, thus allowing continuous psychiatric care and study for more than 60 years of a population that has remained relatively stable. Records were sample ! from the era before there were specific somatic therapies (1920-1939), from the ECT era (1940-1952) from the neuroleptic era (1953-1957), and from the era of tricyclic therapy (1958–1982).

Angst found that the number of switches into mania and hypomania after admission for an index episode of

depression was low during the presomatic treatment era (1920–1939), increased during the ECT era (1940–1952), decreased again to pretreatment era levels during the neuroleptic era (1953–1957), only to increase dramatically again during the tricyclic era (1958-1982). During the tricyclic era 29.5% of depressed bipolar patients switched, in contrast to 8.3% in the presomatic treatment era. For reasons that are not clear, in his own analysis of the data from the bipolar subgroup Angst combined the ECT era data, with its high switch rates, with the data from the presomatic treatment era in his calculation of pretreatment spontaneous switch rates and then concluded that there was no increase in switch rates after the introduction of tricyclics. No matter how one analyzes or interprets these data, however, the number of bipolar patients is probably too small to draw statistically valid inferences.

Angst found that the number of patients admitted to the hospital with a history of frequent episodes, a history of previous admissions, and a history of hypomania or mania increased dramatically after the introduction of tricyclic antidepressants. He acknowledged that "whether this increase is spontaneous or drug-induced remains an open question." In light of this uncertainty, his conclusion that "there is no evidence for an increase in switches since the introduction of modern antidepressant treatments" seems premature.

Angst's data provide an unusual perspective on trends in affective illness over the decades, but they are subject to the usual problems involved in retrospective studies. For example, changes in patterns of illness observed over the decades might partly reflect changes in the diagnostic style of the treating physicians and differences in sensitivity of prospective and retrospective evaluations. The results are suggestive of a tricyclic effect, but they are not definitive.

Acute Treatment of Depression in Unipolar Patients

There have been numerous reports that antidepressants induce mania or hypomania in an average of 9% of patients treated acutely for depression (reviewed by Bunney [19] and Murphy [18]). Although many of these reports are anecdotal or are based on observations in uncontrolled trials, these figures agree well with the results of 12 prospective, placebo-controlled studies (see table 1) (1-4, 6-13). These studies were carried out before it was customary to evaluate responses of unipolar and bipolar patients separately; therefore, the rate of mania or hypomania in unipolar patients may be inflated by the presence of small numbers of bipolar patients in the samples. Patients usually became hypomanic (6%-7%) rather than manic (1%-2%). Increases in the prevalence of hypomania or mania during antidepressant treatment are statistically significant when the results of all the studies are combined (see table 1); of course, this type of analysis may be invalid because of differences among the studies. In an uncontrolled, nonblind study of tricyclic treatment, Van Scheyen and van Kammen (20) found that 25% of unipolar patients treated with drugs alone switched into mania 15 to 57 days after initiation of therapy. Switches occurred more often with clomipramine than with amitriptyline, and they occurred more rapidly in younger patients than in older ones.

Maintenance Treatment of Bipolar Patients

To our knowledge there is only one prospective, double-blind study of the effects of maintenance antidepressant treatment on the course of bipolar illness in which there was a separate placebo group, that of Prien et al. (16). In that study patients (N=56) were treated for 2 years with lithium, imipramine, or placebo. There was no difference in the frequency of mania between the placebo and imipramine groups during the first 4 months of the study. From the 5th to the 24th month mania occurred in three (33%) of nine patients in the placebo group, six (67%) of nine patients in the imipramine group, and three (12%) of 17 patients in the lithium-treated group. The difference between the imipramine and placebo groups was not statistically significant. When there are large differences between small samples, however, failure to find statistical significance can be misleading because of the possibility of a type II error. The occurrence of hypomania was not recorded.

Selection bias may have affected the outcome of the study. Only those patients who could be stabilized on imipramine during an acute treatment phase entered the study. This selection criterion may have eliminated patients who were most likely to switch into mania during imipramine treatment and left patients who were least likely to switch. Furthermore, women, who may be more likely than men to switch into mania during treatment with antidepressants (23, 39), were underrepresented in this VA-based study.

The effects of maintenance imipramine have been investigated in other studies of bipolar patients that did not employ a separate placebo group. In the NIMH collaborative study Prien et al. (41) evaluated the responses of bipolar patients (N=114) to 2 years of maintenance treatment with lithium, imipramine, or a combination of the two drugs. The frequency of mania was essentially the same in the groups treated with lithium (N=11, 26%) and lithium plus imipramine (N=10, 28%) but was much higher in the group treated with imipramine alone (N=19, 53%). The occurrence of hypomania was not recorded. Because of the absence of a placebo group, the authors were not able to determine whether, and to what extent, the rate of mania was increased by imipramine or decreased by lithium. Because of the possibility that imipramine alone increased the frequency of mania and because there was no advantage of the combination of lithium and imipramine over lithium alone, Prien et al. concluded "that the use of imipramine for the long-term

TABLE 1. Rate of Mania or Hypomania in Predominantly Unipolar Depressed Patients in Placebo-Controlled Studies of Acute Antide pressant

	Length of Treatment	Drug and Maximum		Improved		Mania		Hypomania		M. nia or Hy _I omania	
Study	(days)	Daily Dose (mg)	N	N	%	N	%	N	%	N	%
Ball and Kiloh (1), 1959	28	Imipramine, 250 Placebo	27 28	20 6	74 22	_		1	4	1	4
Leyberg and Denmark (2), 1959	14	Imipramine, 200 Placebo	20 20 ^a	18 2	90 10	_		6	30	6	30
Miller et al. (6), 1960	28 42	Imipramine, 200 Iproniazid, 150	23 23ª	7 1	30 4	_		1 3	5 13	1 3	5 13
Kiloh et al. (3), 1960	14 21	Placebo Iproniazid, 150 Placebo	23 ^a 26 28	1 14 3	4 54 11	_		1	4	1	4
Hohn et al. (7), 1961	28	Imipramine, 200 Placebo	14 13 ^a	9 7	64 54	1	7	_	_	1	7
Rees and Davies (8), 1961	21	Phenelzine, 90 Placebo	21 21ª	11 3	50 15	_		_			_
Bartholomew (9), 1962	42	Tranylcypromine, 60 Placebo	20 20	6 5	30 25	1	5			1	5
Browne et al. (10), 1963	28	Amitriptyline, 150 Placebo	19 26	9 8	47 31	1	5			1	5
Gottfries (11), 1963	15	Tranylcypromine, 30 Placebo	25 25	6 2	24 8	_					_
Skarbek (12), 1963	28	Amitriptyline, 225 Placebo	23 23 ^a	14 4	60 17	_	******	1	4	1	4
Vahia et al. (13), 1964	28	Imipramine, 300 Placebo Amitriptyline, 75	49 42 21	34 9 5	69 21 22	_		3 - 1	6 4	3 1	6 4
Klein (4), 1966	49	Placebo Imipramine, 300	18 16	2 8	11 50	$\frac{-}{3}$	 19	- 1	- 6	4	25
Total		Placebo Tricyclic Placebo	11 212 204	2 123 41	18 58 20	4	2 ^b	15	7°	19	9 ^d
		MAOI Placebo	115 117	21	30 13	1	1	4	6°	5	7 ^f

^aOwn-control, crossover design.

 $\chi^2 = 5.19$, df=1, p<.05.

preventive treatment of bipolar disorder is not recommended." As with the 1973 Prien et al. study (16), a substantial number of patients who had an unstable course during the first 2 months of treatment with imipramine plus lithium were eliminated (25% of the original sample). Since Prien et al. selected only those patients who remained stable on the combination of lithium and imipramine, it is hardly surprising that patients treated with this combination of drugs had a relatively good outcome during the maintenance phase of the study.

Quitkin et al. (23) compared the effects of lithium alone to the effects of lithium plus imipramine in the long-term maintenance treatment of bipolar patients (N=75). The rate of manic recurrences was more than twice as high in the group treated with lithium and imipramine (N=9, 24%) as in the group treated with lithium alone (N=4, 11%), but this difference was not statistically significant. Again, the possibility of a type II error has to be considered whenever large differences between small samples are not statistically significant.

The difference could be attributed partly to the women in the study: five times as many women switched into mania with the combination treatment (N=7, 3.2%) as with lithium alone (N=1, 6%), and this difference was statistically significant in a post hoc analysis. Comparative figures for men were 14% (N=2) and 15% (N=3). Patients characterized as "mania-prone" (those whose most recent episode was mania rather than depression) were also more likely to switch into mania with the combination treatment. The frequency of hypomania was not recorded. Because of their post hoc nature, these observations require validation in a prospective study.

Maintenance Treatment of Unipolar Patients

In the VA-NIMH collaborative study Priem et al. (16) found no difference in the prevalence of mania in unipolar patients maintained with imipramine N=1, 5%), lithium (N=2, 9%), or placebo (N=1, 8° ₀). The occurrence of hypomania was not recorded. The re-

 $^{^{}b}\chi^{2}=3.88$, df=1, p<.05. $^{c}\chi^{2}=14.98$, df=1, p<.01.

 $d\chi^2 = 19.16$, df=1, p<.01. $c\chi^2 = 4.13$, df=1, p<.05.

sults with these patients may not be representative of an unselected sample, however, because patients who responded adversely to acute treatment with the drugs were excluded from the study.

In the NIMH collaborative study Prien et al. (41) found that 8% (N=3) of imipramine-treated unipolar patients developed manic episodes during maintenance treatment, compared with 6% (N=2) of patients taking placebo. This difference was not statistically significant. The appearance of hypomania was not recorded. Because 54% of the patients were dropped from the study, mostly because of adverse responses during acute treatment with antidepressants, the responses of the remaining patients are not likely to be representative of an unselected sample of unipolar patients.

DO ANTIDEPRESSANTS INCREASE THE FREQUENCY OF RECURRENCES AND INDUCE RAPID CYCLING?

There have been a number of reports that antidepressants may increase the frequency of recurrences after the acute treatment of a depressive episode (14, 15, 21, 25-38). In the German literature, several investigators have claimed that antidepressants sometimes transform the illness from an episodic course with free intervals to a chronic course with continuous illness (chronifizierung) (14, 34). In some cases, according to these investigators, drugs do not achieve a true remission but create a fragile equilibrium near the threshold of depression where relapses and remissions are a function of changes in drug dose. In other cases drugs produce a destabilization (labilizierung) characterized by the occurrence for the first time of hypomania followed by continual cycling between hypomania and depression. This type of antidepressant-induced rapid cycling was first described in 1956 in a tuberculosis patient treated with iproniazid (42), and since that time numerous reports of similar cases have appeared (see table 2 and figures 2 and 3). There have also been reports of increased frequency of recurrences in unipolar patients treated with antidepressants (27). In most instances these reports are based on nonblind, uncontrolled studies in which observations were partly or wholly retrospective. To date, the only placebocontrolled, prospective, double-blind studies are those of Wehr and Goodwin (28, 29) and Wehr et al. (37), in which patients served as their own controls and which showed that reversible rapid cycling between mania and depression could be induced by tricyclic and MAOI antidepressants in certain bipolar patients. In 51 patients who presented with rapid-cycling bipolar illness, the rapid cycling appeared to depend on the continuing administration of antidepressants in approximately 50% (37), a figure that agrees well with the uncontrolled, nonblind observations of Kukopulos et al. (34). However, as mentioned previously, the selection of patients for these studies may have been biased in that patients who are most likely to be referred to a specialized research center are those who

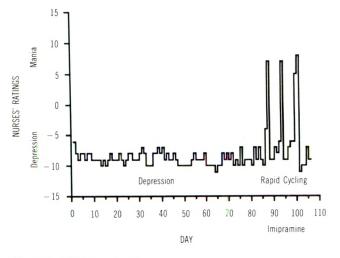
TABLE 2. Induction of Rapid Cycling by Antidepressants Reported in the Literature

	Patients Rapid C		
Study	N	%	Type of Drug
Crane (42), 1956	1 a	_	MAOI
Arnold and Kryspin-Exner			
(14), 1965	1ª	_	Tricyclic
Till and Vuckovic (15), 1970	7	27	Tricyclic
Coppen et al. (50), 1972	2 2	67	Tricyclic
Van Scheyen (27), 1973	2	2	Tricyclic
Wehr and Goodwin (21, 28,			
29), 1979	6 ^a	_	Tricyclic, MAOI
Siris et al. (32), 1979	1ª	_	Tricyclic
Kukopulos et al. (34), 1980	59	51	Tricyclic, MAOI
Lerer et al. (33), 1980	1 a	_	Tricyclic
Ko et al. (35), 1981	1 a	_	L-Dopa
Mattsson and Seltzer (36),			
1981	1 ^a	_	MAOI
Extein et al. (30), 1982	1 ^a	_	Tricyclic
Oppenheim (31), 1982	1.a	_	Tricyclic
Wehr et al. (37)	26 ^b	51	Tricyclic
Total	104 ^b		

^aIsolated case reports.

^bCumulative total; six patients studied by Wehr and Goodwin in 1979 were included in the later study by Wehr et al.

FIGURE 2. Imipramine-Induced Rapid Cycling in a 41-Year-Old Depressed Bipolar Woman^a

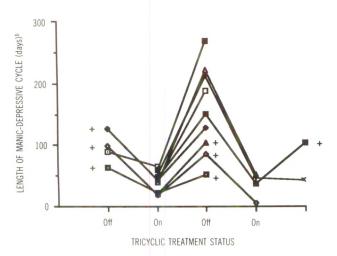


^aData from Wehr et al. (37).

respond adversely to standard treatments. It is difficult to determine what percentage of bipolar patients in other settings develop drug-induced rapid cycling when treated with antidepressants because the phenomenon is seldom looked for, and it cannot be observed if patients who exhibit the response are systematically excluded from studies and if antidepressants are stopped or observations cease as soon as they become manic. In our patients lithium was incapable of preventing antidepressant-induced rapid cycling (37), although its overall efficacy in this situation has not been studied systematically.

The fact that antidepressants can induce rapid cy-

FIGURE 3. Shortening of Manic-Depressive Cycle by Tricyclic Antidepressants in 10 Rapid Cycling Bipolar Patients Whose Switches Were Recorded Prospectively^a



^aData from Wehr et al. (37). The various symbols on the lines denote different patients. The plus signs indicate that the cycle was incomplete or that the patient had stopped cycling during the period without tricyclics.

bManic-depressive cycle is defined as onset of mania to onset of

mania.

cling has seldom been considered in descriptions of affective patients' clinical course and in interpretations of their responses to treatment. For example, novel agents or procedures reported to be effective in the maintenance treatment of recurrent affective disorder have often been instituted after extended or repeated periods of treatment with antidepressant drugs; in these cases investigators have usually attributed cessation of frequent recurrences to the new treatment regimens and have neglected the possibility that withdrawal of antidepressants may be at least partly responsible for the change (51–55). Some studies of the natural course of affective disorder may have been contaminated by this effect of antidepressants; increases in the frequency of recurrences of affective episodes reported to be associated with increasing age and with duration of illness could arise in part from the cycle-accelerating effects of antidepressant medications (48, 49).

WHO IS AT RISK?

In bipolar patients there is some evidence that women have a higher risk of drug-induced mania and drug-induced rapid cycling than do men (23, 34, 37, 39). The results of Quitkin et al. (23) suggest that a history of mania proneness may also be predictive of manic reactions to antidepressants.

Akiskal (22) has proposed that patients with premorbid cyclothymic temperaments are prone to develop mania, and Kukopulos et al. (34) have extended these conclusions to patients who develop rapid cycling. There has been no systematic prospective study of this possible risk factor, however.

Zis et al. (56) found that urinary levels of the norepinephrine metabolite 3-methoxy-4-hydroxyphen-ylglycol were positively correlated with the latency of onset of mania and hypomania in depressed bipolar patients treated with tricyclic antidepressants (most rapid onset in patients with lowest levels). Van Scheyen and van Kammen (20) found that age of depressed unipolar patients was positively correlated with the latency of onset of mania in those who became manic (most rapid onset in youngest patients). These findings need to be validated in prospective studies.

There is an association among female sex, hypothyroidism, and drug-induced rapid cycling, but these possible risk factors have not been studied prospectively (34, 37, 57, 58).

CONCLUSIONS

The capacity of antidepressant medications to precipitate mania or hypomania or to induce rapid cycling is of interest for both theoretical and practical reasons. The issue has not, however, been adequately investigated. What is needed are prospective, placebocontrolled studies that include patients most at risk for these reactions and that also evaluate outcome in unipolar and bipolar patients separately.

We believe that the available evidence suggests that antidepressants can precipitate mania and hypomania in bipolar patients. Mania and hypomania occur very frequently in responders to treatment in longitudinal studies, and the time of their occurrence suggests that they are related to the antidepressant effects of the drugs (17, 21, 24). In the only placebo-controlled study of bipolar patients done to date, a majority of those treated with an antidepressant drug became manic, twice the rate for placebo-treated patients (16). The lack of statistical significance for this finding may be a type II error resulting from the small number of subjects. Another shortcoming of the study is that the method used for selecting patients may have introduced a bias against finding drug-induced mania.

Clinically, the induction of hypomania may be beneficial to some patients, while producing manic reactions may be destructive. The preliminary results of Quitkin et al. (23) suggest that identification of patients most at risk for becoming manic after taking antidepressant drugs could be done by reviewing previous history of proneness to mania or drug-induced mania. MAOI antidepressants may be less likely than tricyclics to induce severe manias (24), but this possible difference needs further evaluation.

Of more practical interest is the question of whether the combination of lithium and antidepressants is associated with a higher rate of manic switches than lithium alone. The results of Quitkin et al. (23) suggest that lithium does not completely prevent imipramine-

induced mania, at least in women and mania-prone individuals, but these post hoc findings need to be validated in a prospective study. Unfortunately, the NIMH collaborative study (41) may not shed further light on this problem because of possible selection bias (patients who responded poorly to the combination treatment during a stabilization phase were excluded from the study). Even so, the results suggest, as Prien et al. point out, that there is no advantage of the combination treatment over lithium alone. Paradoxically, a recent anecdotal report suggests that lithium may induce mania when it is added to antidepressant medications to potentiate their effects (59). Additional studies of combination treatment are needed, but these studies should be designed so that patients most at risk for drug-induced mania are not excluded and sample sizes are large enough to minimize type II errors.

It is unclear whether and to what extent antidepressants induce mania and hypomania in unipolar patients. Results of the early placebo-controlled studies are confounded with manic reactions of small numbers of bipolar patients who were included in the samples. Furthermore, in many of these studies, hypomanic reactions predominated and may have caused little difficulty in clinical management. In the maintenance studies, which were negative, patients who were most likely to have adverse responses may have been excluded. For a large majority of unipolar patients, mania will not be a problem during antidepressant treatment, although early onset, a relatively high frequency of recurrences, and a family history of mania may constitute special risk factors (22).

It seems clear that antidepressants induce reversible rapid cycling between mania and depression in some patients. Women appear to be at increased risk for this response (34, 37, 57, 58). Rapid cycling may be caused by antidepressants in as many as half of the rapidcycling patients referred to tertiary treatment centers. The percentage of patients who respond to antidepressant treatment in this manner is unknown, but it is probably quite low in primary care settings. With one exception (37), no placebo-controlled study has been designed in a way that would permit antidepressantinduced rapid cycling to be detected. The practical point is that whenever rapid cycling occurs in a patient receiving an antidepressant, the possibility that the drug has caused the rapid cycling should be considered. In these cases discontinuation of antidepressants and administration of lithium or other mood stabilizers may lead to sustained remissions. Using this approach, Wehr et al. (37) obtained essentially complete remissions in 37% of 51 rapid-cycling patients who had been considered refractory to treatment; this result contrasts with the finding of a negative impact of routine administration of antidepressants reported by Prien et al. (41), who noted no remissions in 18 rapidcycling patients.

Antidepressant medications continue to play a major role in the acute treatment of depression in most unipolar and some bipolar patients and in the mainte-

nance treatment of unipolar patients. Some bipolar patients and few, if any, unipolar patients become manic when they are treated with antidepressants. A small number of patients develop rapid cycling. The prevention of these reactions will require further research on risk factors and on the antimanic efficacy of coadministered lithium.

REFERENCES

- Ball JRB, Kiloh LG: A controlled trial of imipramine in treatment of depressive states. Br Med J 1959; 2:1052–1055
- Leyberg JT, Denmark JC: The treatment of depressive states with imipramine hydrochloride (Tofranil). J Ment Sci 1959; 105:1123-1126
- Kiloh LG, Child JP, Latner G: Controlled trial of iproniazid in the treatment of endogenous depression. J Ment Sci 1960; 106: 1139–1144
- Klein DF: Chlorpromazine-procyclidine combination, imipramine and placebo in depressive disorders. Can Psychiatr Assoc J (Suppl) 1966; 11:146–149
- Freyhan FA: Zur modernen psychiatrischen Behandlung der Depressionen. Nervenarzt 1960; 31:112–118
- Miller A, Baker EF, Lewis D, et al: Imipramine: a clinical evaluation in a variety of settings. Can Psychiatr Assoc J 1960; 5:150-160
- 7. Hohn R, Gross GM, Gross M, et al: Double-blind comparison of placebo and imipramine in the treatment of depressed patients. J Psychiatr Res 1961; 1:76–91
- Rees L, Davies B: A controlled trial of phenelzine ("Nardil") in the treatment of severe depressive illness. J Ment Sci 1961; 107: 560–566
- Bartholomew AA: Evaluation of transleypromine ("Parnate") in the treatment of depression. Med J Aust 1962; 49:655–662
- Browne MW, Kreeger LC, Kazamias NG: A clinical trial of amitriptyline in depressive patients. Br J Psychiatry 1963; 109: 692-694
- 11. Gottfries CG: Clinical trial with the MAOI tranylcypromine on a psychiatric clientele. Acta Psychiatr Scand 1963; 39:463–472
- 12. Skarbek A: Trial of amitriptyline in chronic depression. Dis Nerv Syst 1963; 24:115-119
- Vahia NS, Bagadia VCN, Doongaji DR, et al: Value of some antidepressants. Hospital Reports by the Medical and Professional Staff of the Jamsetji Jijibhai. Hosp Grant Med Coll 1964; 9:199–203
- Arnold OH, Kryspin-Exner K: Zur Frage der Beeinflussung des Verlaufes des manisch-depressiven Krankheitsgeschehens durch Antidepressiva. Wien Med Wochenschr 1965; 45/46:929–934
- Till E, Vuckovic S: Uber den Einfluss der thymoleptischen Behandlung auf den Verlauf endogener Depressionen. Int Pharmacopsychiatry 1970; 4:210–219
- Prien RF, Klett CJ, Caffey EM Jr: Lithium carbonate and imipramine in prevention of affective episodes: a comparison in recurrent affective illness. Arch Gen Psychiatry 1973; 29:420– 425
- Murphy DL, Brand E, Baker M, et al: Phenelzine effects in hospitalized unipolar and bipolar depressed patients, in Neuropsychopharmacology. Edited by Boissier JR, Hippius H, Pichot P. New York, Elsevier, 1975
- 18. Murphy DL: The behavioral toxicity of monoamine oxidaseinhibiting antidepressants, in Advances in Pharmacology and Chemotherapy, vol 14. Edited by Garattini S, Goldin A, Hawking F, et al. New York, Academic Press, 1977
- 19. Bunney WE Jr: Psychopharmacology of the switch process in affective illness, in Psychopharmacology: A Generation of Progress. Edited by Lipton MA, DiMascio A, Kellam KF. New York, Raven Press, 1978
- Van Scheyen JC, van Kammen DP: Clomipramine-induced mania in unipolar depression. Arch Gen Psychiatry 1979; 36: 560-565

- 21. Wehr TA, Goodwin FK: Rapid cycling between mania and depression caused by maintenance tricyclics. Psychopharmacol Bull 1979; 15:17-19
- 22. Akiskal HS: External validating criteria for psychiatric diagnosis: their application in affective disorders. J Clin Psychiatry 1980; 41(12, part 2):6-15
- 23. Quitkin FM, Kane J, Rifkin A, et al: Prophylactic lithium carbonate with and without imipramine for bipolar I patients: a double-blind study. Arch Gen Psychiatry 1981; 38:902-907
- 24. Himmelhoch JM, Thase ME, Mallinger AG, et al: Tranylcypromine versus imipramine in manic depression, in New Research Program and Abstracts of the 139th Annual Meeting of the American Psychiatric Association. Washington, DC, APA, 1986
- 25. Angst J, Dittrich A, Grof P: Course of endogenous affective psychoses and its modification by prophylactic administration of imipramine and lithium. Int Pharmacopsychiatry 1969; 2:1-
- 26. Hoheisel HP: Zur Frage der Verkurzung von Intervallzeiten psychopharmakologisch behandelter phasischer Psychosen. Nervenarzt 1966; 37:259-263
- 27. Van Scheyen JD: Recurrent vital depressions. Psychiatr Neurol Neurochir 1973; 76:93-112
- 28. Wehr TA, Goodwin FK: Tricyclics modulate frequency of manic-depressive cycles. Chronobiologia 1977; 4:161
 29. Wehr TA, Goodwin FK: Rapid cycling in manic-depressives
- induced by tricyclic antidepressants. Arch Gen Psychiatry 1979;
- 30. Extein I, Pottash ALC, Gold MS: Does subclinical hypothyroidism predispose to tricyclic-induced rapid cycles? J Clin Psychiatry 1982; 43:290-291
- 31. Oppenheim G: Drug-induced rapid cycling: possible outcomes and management. Am J Psychiatry 1982; 139:939-941
- 32. Siris SG, Chertoff HR, Perel JM: Rapid-cycling affective disorder during imipramine treatment: a case report. Am J Psychiatry 1979; 136:341–342
- 33. Lerer B, Birmacher B, Ebstein RP, et al: 48-Hour depressive cycling induced by antidepressant. Br J Psychiatry 1980; 137: 183 - 185
- 34. Kukopulos A, Reginaldi D, Laddomada P, et al: Course of the manic-depressive cycle and changes caused by treatments. Phar-
- macopsychiatry 1980; 13:156–167
 35. Ko GN, Leckman JF, Heninger GR: Induction of rapid mood cycling during L-dopa treatment in a bipolar patient. Am J Psychiatry 1981; 138:1624-1625
- 36. Mattsson A, Seltzer RL: MAOI-induced rapid cycling bipolar affective disorder in an adolescent. Am J Psychiatry 1981; 138: 677-679
- 37. Wehr TA, Sack DA, Rosenthal NE, et al: Rapid cycling affective disorder: contributing factors and treatment responses in fifty-
- one cases. Am J Psychiatry (in press)
 38. Schipkowensky N, Milenkow K: Zur Epidemiologie, Actiologie und Prophylaxe der chronischen Zyklophrenie. Int Pharmacopsychiatry 1970; 4:117–153
 39. Lewis JL, Winokur G: The induction of mania: a natural history
- study with controls. Arch Gen Psychiatry 1982; 39:303-306
- 40. Angst J: Switch from depression to mania-a record study over decades between 1920 and 1982. Psychopathology 1985; 18: 140-154

- 41. Prien RF, Kupfer DJ, Mansky PA, et al: Drug therapy in the prevention of recurrences in unipolar and bipolar iffective disorders: report of the NIMH Collaborative Stud Group comparing lithium carbonate, imipramine, and a lith um carbonate-imipramine combination. Arch Gen Psychiat v 1984: 41:1096-1104
- Crane GE: The psychiatric side-effects of iproniazi l. Am J Psychiatry 1956; 112:494-501
- 43. Ploog D: "Psychische Gegenregulation" dargestellt an Verlauf von Elektroschockbehandlungen. Arch Psychiatr z Neurol 1950; 183:617-663
- 44. Fink M, Khan RL: Behavioral patterns in convulsive therapy. Arch Gen Psychiatry 1961; 5:30-36
- 45. Wehr TA, Wirz-Justice A, Goodwin FK, et al: 48-He at sleepwake cycles in manic-depressive illness: naturalistic observations and sleep deprivation experiments. Arch Gen Parchiatry 1982; 39:559-565
- 46. Akindele MO, Evans JI, Oswald I: Mono-amine oxidese inhibitors, sleep and mood. Electroencephalogr Clin Neu ophysiol 1970: 29:47-56
- 47. Friend DG, Zileli MS, Hamlin JT, et al: The effect of irroniazid on the inactivation of norepinephrine in the human. J i lin Exp Psychopathol 1958; 19:61-68
- 48. Grof P, Angst J, Haines T: The clinical course of de ression: practical issues, in Symposia Medica Hoechst 8: Clas-ification and Prediction of Outcome of Depression. Edited by Angst J. New York, Schattauer Verlag, 1974
- 49. Zis AP, Goodwin FK: Major affective disorder as a ccurrent illness: a critical review. Arch Gen Psychiatry 1979; 36:835-839
- 50. Coppen A, Whybrow PC, Noguera R, et al: The cormarative antidepressant value of L-tryptophan and imipramine with and without attempted potentiation by liothyronine. A ch Gen Psychiatry 1972; 26:234-241
- 51. Baastrup CP, Schou M: Lithium as a prophylactic gent: its effect against recurrent depression and manic-depressive psychosis. Arch Gen Psychiatry 1967; 16:162-172
- Christodoulou GN, Malliaras DE, Lykouras EP, et al Possible prophylactic effect of sleep deprivation. Am J Psychia 1y 1978; 135:375-376
- 53. Forrest D: Bipolar illness following right hemispherectomy. Arch Gen Psychiatry 1982; 39:817–823
- 54. Post RM, Uhde TW, Ballenger JC, et al: Prophylactic cincacy of carbamazepine in manic-depressive illness. Am J Lychiatry 1983; 140:1602-1604
- 55. Cohen BM, Baldessarini RJ: Tolerance to therapeutic effects of antidepressants. Am J Psychiatry 1985; 142:489-490
- 56. Zis AP, Cowdry RW, Wehr TA, et al: Tricyclic-induced manie and MHPG excretion. Psychiatry Res 1979; 1:93-95
- 57. Cho JT, Bone S, Dunner DL, et al: The effect collithium treatment on thyroid function in patients with primar affective disorder. Am J Psychiatry 1979; 136:115-116
- 58. Cowdry RW, Wehr TA, Zis AP, et al: Thyroid abnormalities associated with rapid cycling bipolar illness. Arch Gen Psychiatry 1983; 40:414-420
- 59. Price LH, Charney DS, Heninger GR: Manic symptoms following addition of lithium to antidepressant treatment. I Clin Psychopharmacol 1984; 4:361-362

Psychiatry and the Nursing Home

Soo Borson, M.D., Benjamin Liptzin, M.D., James Nininger, M.D., and Peter Rabins, M.D.

In the last two decades, nursing homes have become major providers of health services for the frail elderly. Despite ample evidence of need for specialized psychiatric services in the nursing home setting, the majority of patients who could benefit from such care do not receive it. The authors propose a fourfold role for the psychiatrist, encompassing clinical care, consultation, teaching, and research. Features of this role can be adapted to fee-for-service, community mental health center, and academic models of psychiatric practice.

(Am J Psychiatry 1987; 144:1412-1418)

The contemporary nursing home is a relatively new institution, a hybrid of the social tradition of the poorhouse and the medical tradition of the modern hospital. At the turn of the century, care of the impaired or frail elderly was a family function; institutions for the aged, supported either by the state or by religious organizations, were small and custodial in purpose and functioned as charities to serve the poor and homeless.

During the twentieth century, the size and longevity of the older population have achieved proportions never before encountered in history. The population of the United States has tripled since 1900, but the number of persons over age 65 has increased by a factor of seven (1). Two-thirds of our population now survive to age 65, and nearly one in five persons now living will reach the age of 85 (2). The care of this rapidly expanded elderly population, no longer in the work force and often dependent on others for help with daily needs, has become a large and public

Presented in part at the annual meetings of the Gerontological Society of America, San Antonio, Tex., Nov. 19–24, 1984, and New Orleans, Nov. 18–23, 1985; and the American Psychiatric Association, Dallas, May 1–5, 1985, and Washington, D.C., May 10–16, 1986. Received April 22, 1986; revised Aug. 25, 1986; accepted Sept. 18, 1986. From the Psychiatry Service, Seattle VA Medical Center, and the Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine, Seattle; McLean Hospital and Harvard Medical School, Belmont, Mass.; the Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, Md. Address reprint requests to Dr. Borson, Department of Psychiatry (116A), Seattle VA Medical Center, 1660 South Columbian Way, Seattle, WA 98108.

enterprise. To accommodate the growth of the frail elderly population over the last 25 years, the number of nursing home beds in the United States has more than tripled to over 1.5 million at the present time, and expenditures for long-term care have increased more than twentyfold (3). By the middle of the next century, it is estimated that more than one in every 100 persons in the United States will reside in a nursing home (4).

These figures reflect the emergence of nursing homes as a major health care resource for the older population, but one that still remains largely outside the mainstream of traditional medical practice. Despite this "invisible" position, major and cumulative improvements in nursing home administration and clinical care have been occurring since the passage of Medicare and Medicaid legislation in the mid-1960s. These changes include an increasing demand for accountability in long-term care and a trend toward the gradual replacement of custodial care with active rehabilitation as the standard of nursing home practice. Large, comprehensive facilities now offer a wide spectrum of physical and social services that bring them closer in concept to the long-stay hospital than to the charitable organization of the past.

Nursing homes serve a chronically ill, functionally dependent segment of the population. Multiple degenerative diseases and impairment in the capacity for self-care are characteristic of nursing home residents as a group (5). These high levels of impairment promote the mistaken belief that nursing homes are mainly concerned with terminal care; in fact, about one-third of elderly persons in nursing homes have lived there for 1-3 years, and another third have been residents even longer (6). The objectives of care for these longer-stay patients are, of necessity, different from those of patients in both the acute care hospital and the office or outpatient clinic. Long-term care emphasizes maintenance of functional capacity, delaying the progress of disease when possible, and creation of a safe, supportive environment that promotes maximal autonomy and life satisfaction. The overarching philosophy of good long-term care is the preservation of dignity and purpose in the face of dependency and decline.

A substantial proportion of long-term residents of today's nursing homes are patients with disabling mental or emotional disturbance. Dementing illness, particularly Alzheimer's disease, is a major cause of functional disability leading to nursing home place-

ment (7). The prominence of degenerative brain disease as a cause of disability in the nursing home population may promote unwarranted therapeutic nihilism among psychiatrists unfamiliar with its management and obscure the equally important functional disturbances more amenable to traditional psychiatric approaches. In the following sections, we review what is currently known about the prevalence of dementia and other mental disorders among nursing home patients, the value of psychiatric intervention in the long-term care setting, and the organization and distribution of mental health services for the elderly in nursing homes. Finally, we propose some next steps in the development of an effective clinical psychiatry for the frail elderly in the nursing home, a goal now within the reach of our profession.

PREVALENCE OF MENTAL DISORDERS IN NURSING HOMES

Psychiatric Illness

Nursing homes have replaced the state hospital as the major locus for residential care of the mentally ill elderly (8). Even before deinstitutionalization of large numbers of older psychiatric patients from state hospitals, studies indicated that 80%-90% of elderly nursing home patients suffered from some mental disorder, often dementia with complicating psychosis, mood disorder, or behavioral disturbance (9-11). This picture has not changed substantially over the last 30 years, although nursing homes have taken on the care of patients formerly cared for in psychiatric settings (8, 9) or at home. More recent studies suggest that nursing home residents present a heterogeneous mix of diagnosable mental disorders and psychiatric symptoms (6, 12). In the late 1970s, a survey by the Assistant Commissioner of Health (Geriatric Affairs) for the State of New York found that 45% of 200,000 patients in skilled nursing facilities and 20%-30% in intermediate care were experiencing clinically significant mood or behavior disorders for which psychiatric referral was indicated (unpublished 1979 paper by G. Warner). The National Center for Health Statistics, in its 1977 National Nursing Home Survey (6), reported that about 20% of all nursing home residents (over 250,000 patients) had a mental disorder (psychiatric illness or dementia) as their primary source of disability and that nearly 70% (more than 900,000 patients) had a chronic mental disorder contributing to social dependency, functional impairment, and need for nursing home care.

The Epidemiologic Catchment Area program (13) is the first study to use modern epidemiologic methods to study the frequency of mental disorders in nursing homes and is expected to provide important new prevalence data using *DSM-III* as the diagnostic standard. Preliminary analysis of the data suggests that affective, anxiety, and behavioral disorders as well as

dementing illness per se are significant sources of psychiatric morbidity among the elderly in lorg-term care.

Behavioral Problems

Two investigations have explored the pre-alence and nature of behavioral disturbances of nursin; home residents from a phenomenological rather than a diagnostic perspective. The National Nursing Home Survey (6) identified behavioral problems in two-thirds of the patients sampled. Of those judged to be disturbed, one-third were apathetic or withdrawn; another third were agitated, nervous, or hyperactive. About one-fifth were disruptive, aggressive, or abusive to other patients or staff, and one-tenth were problem was derers. The remaining one-tenth had uncategorized behavioral problems. A second study (14), using the New York State data base, found significant behavior problems in 64% of a large random sample of patients in 42 skilled nursing facilities, of which one-third were "severe" and two-thirds were "moderate." The three most common specific problem behaviors were verbal abusiveness (13%), physical resistance to care (11%), and physical aggressiveness (8%); men were overrepresented in these problem categories.

Despite this large burden of mental and en otional disturbance, considerable evidence indicates that psychiatric problems are frequently undiagnosed 11, 15) or misdiagnosed (16) and that opportunities for effective intervention may be obscured by diagnostic bias toward "incurable" conditions (17). Psychiatr c problems are frequently overlooked both in the initial evaluation of patients entering a nursing hone and later on during the care planning process. In a study of 100 consecutive admissions to two nursing homes (18), mental disorders were the immediate cause in over half, but the relevant diagnosis was misse by the admitting physician 25% of the time. The ma ority of diagnostic errors made by admitting physic ans involved failure to identify a disabling psychiatric or neurologic disease or to address a potentially treatable behavioral disturbance. In another study (12), substantial psychiatric illness went undiagnosed in two-thirds of disturbed patients. The use of a multidisciplinary assessment procedure at the time of admission can considerably reduce the frequency of diagnost c errors (19), but such comprehensive psychiatric and behavioral evaluation has not been implemented on a broad scale.

PSYCHIATRIC INTERVENTION IN THE LONG-TERM CARE SETTING

Programs

Stotsky's early intervention study with chronic psychiatric patients discharged from a state hospital to Boston-area nursing homes in the 1960s (20) demon-

strated that an approach combining direct psychiatric services and consultation to staff improved patients' adjustment to life in the community. Death and rehospitalization rates were lower in the group receiving treatment than in the group of patients not receiving such intervention. This study established the benefits of psychiatric services in the nursing home setting, at least for the chronically mentally ill, and provided a model for development of community mental health center programs that has been followed nationwide. Some of these programs have branched out to provide psychiatric services to a broader range of patients than the former state hospital group for which they were initially designed. The staff for these mental health center programs have become de facto geriatric specialists by virtue of their experience on the job.

Mental-health-center-based programs remain the primary source of information on psychiatric programs appropriate to the nursing home. Consultative models have been most frequently described. Gurian and Scherl (21) reported on a university-affiliated mental health center program offering in-service training for nursing home staff and direct treatment of patients. Liptzin (22) has elaborated on a role for the geriatric psychiatrist as consultant to nursing home staff.

Colthart (23) has described how a skilled nursing facility can also provide intensive, direct psychiatric services. In this quasi-inpatient model, treatment is provided by a multidisciplinary team of physician, social worker, nurse, and activity therapist and is individually tailored to patient needs. Existing staff can be trained in the concepts and operation of a therapeutic milieu, and all contemporary modalities available for treatment of mental disorders, including group work, pharmacotherapy, behavioral treatment, and ECT, can be adapted to the nursing home setting. This successful program has continued to evolve and is now an integral part of an active academic teaching program in geriatric psychiatry at the University of Rochester School of Medicine in New York. A crucial element in this model is intensive staff education that uses both psychiatric nurse clinicians and psychiatrists as consultants and coordinators of care.

Staff Training

Staff education and consultation are critical to the success of any mental health service plan for nursing homes. Nurses' aides, who provide most of the handson care for patients, come to the job equipped with only those interpersonal skills and psychological insights they possess as private individuals. Like people in general, some show distinct emotional gifts; others readily display and pass on to patients whatever difficulties and disappointments they carry from their own histories and current lives. However, nursing home aides can be successfully trained while on the job to manage some behavior problems effectively if strong support and leadership are provided by administrative

and supervisory staff (24). A demonstration project sponsored by the National Institute of Mental Health (NIMH) (25) showed significant improvement in both factual understanding of aging and attitudes toward old people following structured course work in various aspects of gerontological practice and group dynamics. Several states have begun to offer aide training and certification programs based on these findings.

Psychological Approaches to the Nursing Home Patient

Certain types of clinical intervention unique to the long-term care setting are useful in managing the behavioral disengagement formerly endemic among patients in nursing home environments. Stimulating social interaction and personal interest displayed by caregivers can have clinically and statistically significant effects on apathy and withdrawal of disabled patients (26). In addition, the use of simple design elements such as photographs and personal histories to enhance the living space of demented or uncommunicative patients can favorably influence staff attitudes toward them (27) and help to counteract the dehumanizing effects of institutional life. Such activities require minimal outlay of money and staff resources but contribute favorably to the quality of the nursing home environment for both patients and employees.

In addition to these nonspecific interventions applicable to all patients, formal, individualized psychotherapy can be effective for selected nursing home residents. Dynamic and behavioral paradigms have been successfully adapted to management of a variety of psychopathologic disturbances. Characterologic problems (28), paranoid illness (late paraphrenia) (29, 30), and depression (26, 31, 32) may all respond well to psychological treatment in the nursing home setting.

Group treatment approaches have gained considerable popularity in nursing homes, particularly as formats for recreation, exercise, and stimulation of patients with severe disability. In addition, traditional group psychotherapy can be helpful for more functional patients (33) and should be evaluated in controlled studies.

Pharmacotherapy

Drug treatment of nursing home patients has received a good deal of attention, much of it negative (3). Several studies offer evidence of overuse of psychotropic drugs in the nursing home setting. In a survey of 60 homes (34), over half of the patients were found to be receiving some psychoactive agent on a regular basis. Fewer than 10% had a recorded diagnosis justifying the use of psychotropic medication, and virtually none had been seen by a psychiatrist. Prien (35), reviewing data from nine studies, found that over 80% of patients received some psychotropic agent, most commonly neuroleptics and sedatives. Twenty percent

regularly took neuroleptic drugs, often for their nonspecific sedative effects and to reduce physical activity as well as for their specific antipsychotic effects. In a large cross-sectional study of physicians' prescribing practices, a survey of pharmacy records in 173 nursing homes found that 43% of 5,902 patients had prescriptions for a neuroleptic. The average dose per patient was directly related to the size of the nursing home and the size of the prescribing physician's caseload. Although information was not collected about the symptoms or diagnoses for which these drugs were given, the correlations between physician variables and amount and pattern of drugs prescribed raised concern that antipsychotic agents may be misused in many nursing homes (36). Far less conservative views have been expressed by authors wishing to plead the case for further nursing home reform (3).

It is clear that difficult, often aggressive, patients may receive toxic doses of psychotropic agents without adequate supervision by a clinician skilled in prescribing for behaviorally disturbed elderly patients. However, ascertaining the frequency of true misuse of psychotropic agents is a complex task for clinical research, and satisfactory data are not yet available.

A start in this direction is provided by a study by Barnes et al. (37), who attempted to define neurolepticresponsive behavioral symptoms in nursing home patients with dementia. Although placebo effects were prominent, and most patients receiving active medication did not improve markedly (or even moderately) at the end of the study, a few patients appeared to benefit greatly. Symptoms particularly responsive to neuroleptic treatment were those most closely resembling the picture of acute psychosis: marked agitation, excitement, emotional lability, and fearfulness. Side effects were common; oversedation, extrapyramidal symptoms, and orthostatic hypotension occurred frequently, and approximately one-fifth of patients were rated as worse at the end of the treatment period. Similar findings were reported by Petrie et al. (38). Given these findings and the well-known risk of unmasking tardive dyskinesia following withdrawal from long-term neuroleptic treatment, it is imperative that neuroleptic drugs be used with caution in elderly patients with dementia. Whenever possible, social and environmental techniques for managing behavior problems should be used. Further studies that attempt to delimit the role of pharmacologic treatment for behavioral syndromes in dementia are needed.

Sedative-hypnotic drugs are also frequently prescribed for nursing home patients. Prien (35) found that sleeping pills were prescribed for 35% of nursing home patients, and antianxiety agents for 17%. A large, well-designed cross-sectional study (N=1,122) (39) supported these figures: one-third of all patients had received a sleeping pill on at least two consecutive nights. Agents with short half-lives were not preferentially prescribed, despite evidence that older people are extremely sensitive to drug hangover effects on both mental and motor processes (40, 41). Sedatives may

therefore be an unrecognized source of functional disability in the nursing home setting, a possibility clearly meriting clinical research.

Prescribing practices and indications for anti-lepressant medication have received even less systematic attention than have neuroleptics and sedatives in the institutionalized elderly. About 10% of patie its appear to be receiving tricyclic antidepressants (34, 35, 42). However, the indications for use of tricyclics and the outcome of treatment for depressed nursin; home residents have not been carefully investigated.

MENTAL HEALTH SERVICES IN THE NURSING HOME

No reliable data have been published concerring the availability of psychiatric care as a health service to patients in nursing homes, but results of small surveys (34), including in all about 2,000 beds (less that 0.2% of all nursing home beds in the United States), suggest that fewer than 1% of all patients with a diag rosable mental disorder receive explicit mental health in terventions. Nationwide, psychiatric consultation appears to be requested rarely, even when behavioral problems are serious (14). Although many homes will occasionally use the services of a psychiatrist, and a few have added a psychiatrist to their regular core staff, formal affiliations between nursing homes and practicing psychiatrists remain unusual.

Why are psychiatric services in nursing homes as inconsistent and haphazard as they seem to be? The answers are several. Psychiatrists have had little involvement with elderly patients in general (43). Most have never set foot in a nursing home or geria ric care facility or received special training in the diagnosis and treatment of mental illness in the elderly. In a ldition. the organization of care in the nursing home is unique and unfamiliar to psychiatrists trained in the usual hospital setting. The nurse, rather than the plysician, is the leader of the health care team, and the administrator, social worker, and activity therapist plasstrong and active roles in care. Furthermore, the in-house medical staff may not always welcome the psychiatric consultant, whose function in the nursing hom: lacks a tradition to sanction and define it. Ironically, consultation must be initiated by a physician who may know far less about the patient's emotional and be avioral status than the nurse or aide who is the 'atient's primary caregiver.

The regulatory structure that oversees mursing homes today does not foster the provision of adequate psychiatric services. Although state and federal regulations requiring "psychosocial services" to patients as a condition of Medicaid reimbursement (Public Law 94-63: the Community Mental Health Centers Act) have done much to encourage basic decence in the daily care of the frail elderly, they do not claborate standards or objectives for management of mental and emotional disorders. Compliance with existing regula-

tions can generally be satisfied by a cursory social work history, taken at the time of admission, and a perfunctory activity group. A doctor's prescription for psychotropic drugs suffices to justify their use; no formal diagnostic evaluation or documentation of outcome of treatment is required. Specialized services targeted at the mentally ill, including staff training and formal psychiatric assessment and treatment, are considered supplemental and therefore optional.

The majority of homes have been established primarily as businesses (over 80% are operated for profit); they depend on the vision of their owners and administrators and on the pressures of the marketplace to regulate the quality of their psychosocial and clinical services. The net result is great variability in the range and value of psychosocial services available to patients and a paucity of data on which to base mental health policies.

BRINGING THE PSYCHIATRIST TO THE NURSING HOME

In the previous sections of this paper we have reviewed evidence of the high prevalence of psychiatric impairments among elderly patients in nursing homes and the feasibility of effective management of mental disorders in this setting. The pessimism that often pervades lay thinking about the care of the elderly is, unfortunately, still too common among psychiatrists as well. A primary need, if we are to make psychiatric services available to the impaired elderly who can benefit from them, is to educate psychiatrists to the professional rewards of working with frail older people.

Educational opportunities in geriatric psychiatry continue to grow steadily within residency training programs. The NIMH Branch on Mental Disorders of the Aging (formerly the Center for the Study of Aging) has fostered curriculum development by several means. Within academic psychiatry, career development awards permit faculty to "retool" for careers in aging. Postresidency fellowships provide supervised clinical experience and development of a critical perspective on research with older people. Recently, multilevel training grants have become available to promote special training in geriatrics and geropsychiatry for medical students and general psychiatry residents. Several organizations have begun to debate the advisability of promoting formal subspecialty credentialing in geropsychiatry. These efforts will help to produce a new generation of clinicians with firsthand knowledge of the value of competent psychiatric care for the aged and the skills to provide it.

As attitudinal and experiential obstacles to careers in the psychiatry of aging gradually disappear, financial obstacles come plainly into view as a factor discouraging qualified practitioners from serving the mental health needs of nursing home patients. Medicare, the major third-party payer of health care ex-

penses for the elderly, originated as a means to ensure access to treatment and convalescent care for acute disease (44). Provider reimbursement schedules have been revised over the years to reflect the high prevalence of chronic disease requiring long-term medical management and the rising costs of such care. Coverage for psychiatric disabilities, in general, has not kept pace. In New York City, for example, the usual and customary Medicare fee for a psychotherapy session (defined as lasting more than 25 minutes) is about \$40, considerably below the usual Blue Shield payment for an office session; allowable charges may be even less in other cities. Furthermore, Medicare continues to limit payment for outpatient psychiatric services to the original 1966 ceiling of \$250 per year and requires a 50% copayment by the patient. In effect, a Medicare patient is not covered for even monthly visits. Medicare reimbursement for brief visits (under 25 minutes) and for medication adjustments may be proportionally somewhat better. This benefit and fee structure does not support adequate comprehensive assessment and treatment of elderly patients and selectively encourages superficial psychological and/or pharmacologic treatment of mental disorders in a vulnerable patient group poorly equipped to withstand errors in clinical judg-

Medicare reimbursement for psychiatric consultation in the nursing home is no more favorable. Written consultation reports earn about \$60, and no more than two follow-up visits can be reimbursed (at a rate of \$35 each) over the next 60 days. There is no Medicare provision for reimbursement of a psychiatrist for time spent in consultation with nursing or aide staff. The time and expense of travel from a private office to a nursing home and the expense of hiring secretarial help to manage cumbersome Medicare paperwork are, of course, out-of-pocket expenses for the psychiatrist. Finally, nursing home residents who do not maintain Medicare Part B coverage for nonhospital care have no coverage for these services.

In 1985 the Secretary of Health and Human Services removed the Medicare outpatient limit of \$250 for medical and/or behavioral management of patients with Alzheimer's disease (45). This liberalization of Medicare benefits is a welcome first step toward ending discrimination against care of the elderly with mental disorders.

Despite the difficulties, some psychiatrists have successfully incorporated nursing home work into their practices. These psychiatrists typically spend half a day each week or two in the nursing home, seeing patients and their families and consulting with staff. Some receive a retainer from the nursing home to serve as staff consultant, a relationship that leads easily to patient referrals. Families are sometimes able and willing to pay the usual fee for office treatment. However, income derived from nursing home practice is generally not competitive with office earnings at the present time.

The professional rewards for the psychiatrist who

ventures into the nursing home are several. The opportunity to practice outside the isolated confines of the private office is a stimulus for professional growth. The interaction with people inherent in the consultant's role and the opportunity to refine psychopharmacologic skills and maintain one's acquaintance with general medicine are enriching experiences that can complement an office practice. Psychiatrists with parttime nursing home practices review medical data such as ECGs and serum chemistries and keep abreast of new developments in neurologic diagnosis and treatment. In addition, nursing home psychiatrists may be called on to manage pathologic interpersonal interactions involving patients, their families, and staff. They can both use and refine their skills in dyadic and multiperson therapy, enhancing their roles as couple, family, and group therapists when they return to office work. Finally, nursing home practice offers opportunities for multidimensional treatment of severe psychopathology. The psychiatrist must be able to use medications, environmental interventions, reinforcement contingencies, and psychodynamics to their maximum helping potential. The depth of understanding of the human predicament gained through such experience with patients is a gift to be treasured by physicians who will avail themselves of it.

THE ROLE OF ACADEMIC PSYCHIATRY

Academic departments of psychiatry have a twofold obligation to the frail elderly. The first is to train clinicians, both in psychiatry and in primary care, in the art and science of caring for behaviorally disturbed older people. Although recent publications spotlight the nursing home as a training site for geropsychiatry (46, 47), formal affiliations between academic departments and long-term care institutions are rare. Academic psychiatry lags far behind medicine, nursing, and social work in the creation of working alliances with nursing homes.

During the last several years, the appropriateness of the nursing home as a resource for clinical training in geriatric medicine has been formally recognized through the development of teaching nursing homes. The National Institute on Aging, the Robert Wood Johnson Foundation, and the Beverly Foundation (representing a group of privately owned nursing homes) have brought diverse orientations and expertise to the development of teaching nursing home programs, but the general objective of all three is to blend the teaching and research capabilities of the academic medical center with the unique clinical population and organization of the nursing home. These collaborations are expected to result in improved quality of care for patients, innovations in financing and administration, better preparation of clinicians in the care of our aging population, and progress in understanding and treatment of age-related disorders.

Of approximately 15 teaching nursing home pro-

grams currently funded, several include a scarciprojects in the biology of Alzheimer's disc see it others, psychosocial factors contributing to ursing home placement are a focus of study (48). It estigates tors at New York University have just received the first award with a clinical psychiatric focus to expore the prevalence, clinical presentation, and antech rts o depression in long-term care. Anxiety, exces ve de pendency, and aggressive behavior are other Amico problems in geropsychiatry that create sul tantia burdens of care for nursing home staff a l lene themselves to interdisciplinary investigation add tion, the role of the nursing home environment in prevention and cure of behavior pathology area of major research importance in which a scient psychiatry and nursing homes could, and houle, collaborate.

Leadership in academic psychiatry is re led to establish cooperative efforts with long-term care instrtutions and to develop research methodel sies to study the problems of the frail elderly. This of our will be repaid in better lives for old people 1 1 the families and a more humane future for all of as who will be tomorrow's elders.

REFERENCES

- 1. Brotman HS: Every Ninth American: Report to t Shect 1 Committee on Aging, United States Senate. Wash to on, Da, US Government Printing Office, 1980
- 2. Brody JA: Life expectancy and the health of older Fe ble. J An Geriatr Soc 1982; 30:681-683
- 3. Moss FE, Halamandaris VJ: Too Old, Too Sicl, on Bec: Nursing Homes in America. Germantown, Md, Asse Systems,
- 4. Russell L: An aging population and the use of n e col care. Med Care 1981; 19:633-643
- 5. Brody JA, Foley DJ: Epidemiologic consideration in Tie Teaching Nursing Home: A New Approach to Ger 1 atry. Edited by Schneider EL. New York, Raven Pa
- Norsi g Vital ai d 6. National Center for Health Statistics: The National Home Survey: 1977 Summary for the United Stat Health Statistics, Serial 13, Number 43. Washing c DC, US Government Printing Office, 1979
- 7. Katzman R: Dementia in the context of the teach a nursing home, in The Teaching Nursing Home: A New \ roach ±o Geriatric Psychiatry. Edited by Schneider EL. New Y k. Rav. n Press, 1985
- 8. Schmidt LJ, Rheinhardt AM, Kane RL, et al: The ric 'aily il' n nursing homes: new back wards in the community. Arch Can Psychiatry 1977; 34:687-691
- 9. Redlich F, Kellert SR: Trends in American mental a otal Are J Psychiatry 1978; 135:22-28
- 10. Goldfarb A: Prevalence of psychiatric disorders in n repolit. n old age and nursing homes. J Am Geriatr Soc 1962 (1:77-54
- 11. Stotsky BA: Allegedly nonpsychiatric patients in ner g homes. Am Geriatr Soc 1967; 15:535-544
- 12. Teeter RB, Garetz FK, Miller WR, et al: Psych and distinbances of aged patients in skilled nursing homes. \ J Psyc 1atry 1976; 133:1430-1434
- 13. Regier DA, Myers JK, Kramer M, et al: The NIM pidem >logic Catchment Area program: historical context, a tives, and study population characteristics. Arch Ger suchia: y 1984; 41:934-941
- 14. Zimmer JA, Watson N, Treat A: Behavioral prol 1 's ome g patients in skilled nursing facilities. Am J Public H it 11951; 74:1118-1121

- 15. Sabin TD, Vitug AJ, Mark VH: Are nursing home diagnosis and treatment adequate? JAMA 1982; 248:321–322.
- Ernst PE, Badash D, Beran B, et al: Incidence of mental illness in the aged: unmasking the effects of a diagnosis of chronic brain syndrome. J Am Geriatr Soc 1977; 25:371–375
- National Institute on Aging Consensus Task Force: Senility reconsidered: treatment possibilities for mental impairment in the elderly. JAMA 1980; 244:259–263
- 18. Miller MB, Elliott DF: Errors and omissions in diagnostic records on admission of patients to a nursing home. J Am Geriatr Soc 1976; 24:108–116
- 19. Loeser W, Dickstein E: Avoiding diagnostic errors in admitting patients to a nursing home. J Am Geriatr Soc 1978; 26:558–559
- Stotsky BA: A systematic study of therapeutic interventions in nursing homes. Genet Psychol Monogr 1967; 76:257–320
- Gurian BS, Scherl DJ: A community-focused model of mental health services for the elderly. J Geriatr Psychiatry 1972; 5:77– 92
- 22. Liptzin B: The geriatric psychiatrist's role as consultant. J Geriatr Psychiatry 1983; 16:103–112
- Colthart SM: A mental health unit in a skilled nursing facility.
 J Am Geriatr Soc 1974; 22:453–456
- 24. Moses J: New role for hands-on caregivers: part-time mental health technicians. J Am Health Care Assoc 1982; 8:19–22
- 25. Goldman EB, Woog P: Mental health in nursing homes training project. Gerontologist 1975; 15:119–124
- 26. Power CA, McCarron LT: Treatment of depression in persons residing in homes for the aged. Gerontologist 1975; 15:132–135
- 27. Weisberg J: Raising the self-esteem of mentally impaired nursing home residents. Soc Work 1983; 28:163–164
- Sadavoy J, Dorian B: Treatment of the elderly characterologically disturbed patient in the chronic care institution. J Geriatr Psychiatry 1983; 16:223–240
- Carstensen L, Fremouw WJ: The demonstration of a behavioral intervention for late life paranoia. Gerontologist 1981; 21:329– 333
- 30. Brink TL: Geriatric paranoia. J Am Geriatr Soc 1980; 28:519–522
- Viederman M, Perry SW: Use of a psychodynamic life narrative in the treatment of depression in the physically ill. Gen Hosp Psychiatry 1980; 3:177–185
- Thompson LW, Gallagher D, Nies G, et al: Evaluation of the effectiveness of professionals and nonprofessionals as instructors of "Coping With Depression" classes for elders. Gerontologist 1983; 23:390–396
- 33. Saul S, Saul S: Group psychotherapy in a proprietary nursing

- home. Gerontologist 1974; 14:446-450
- 34. Glasscote RM, Beigel A, Butterfield A, et al: Old Folks at Homes: A Field Study of Nursing and Board-and-Care Homes. Washington, DC, Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, 1976
- 35. Prien RF: Problems and practices in geriatric psychopharmacology. Psychosomatics 1980; 21:213–223.
- Ray WA, Federspiel CF, Schaffner W: A study of antipsychotic drug use in nursing homes: epidemiologic evidence suggesting misuse. Am J Public Health 1980; 70:485–491
- Barnes R, Veith R, Okimoto J, et al: Efficacy of antipsychotic medications in behaviorally disturbed dementia patients. Am J Psychiatry 1982; 139:1170–1174
- Petrie WM, Ban TA, Berney S, et al: Loxapine in psychogeriatrics: a placebo- and standard-controlled clinical investigation. J Clin Psychopharmacol 1982; 2:122–126
- Morgan K, Gilleard CJ, Reive A: Hypnotic usage in residential homes for the elderly: a prevalence and longitudinal analysis. Age Ageing 1982; 11:229–234
- 40. Carskadon MA, Seidel WF, Greenblatt DJ, et al: Daytime carryover of triazolam and flurazepam in elderly insomniacs. Sleep 1982; 5:361–371
- 41. Bonnet MH, Kramer M: The interaction of age, performance and hypnotics in the sleep of insomniacs. J Am Geriatr Soc 1981; 29:508–512
- 42. Ingman SR, Lawson IR, Pierpaoli PG, et al: A survey of the prescribing and administration of drugs in a long-term care institution for the elderly. J Am Geriatr Soc 1975; 23:309–316
- Butler RN: Psychiatry and the elderly: an overview. Am J Psychiatry 1975; 132:893–900
- 44. Stotsky BA: Extended care and institutional care: current trends, methods and experiences, in Mental Illness in Later Life. Edited by Busse EW, Pfeiffer E. Washington, DC, American Psychiatric Association, 1973
- Medicare Carriers' Manual, Part III: Claims Process. Section 4146. Washington, DC, US Department of Health and Human Services, Oct 1, 1985
- Jacobson SB, Juthani N: The nursing home and training in geropsychiatry. J Am Geriatr Soc 1978; 26:408–410
- 47. Lieff JD: Interdepartmental training for the geropsychiatrist. Gerontol Geriatr Educ 1983; 3:237–241
- 48. Maddox GL: The teaching nursing home and beyond: research objectives for the 1980's, in The Teaching Nursing Home: A New Approach to Geriatric Psychiatry. Edited by Schneider EL. New York, Raven Press, 1985

Controllable and Uncontrollable Stress in Humans: Alterations in Mood and Neuroendocrine and Psychophysiological Function

Alan Breier, M.D., Margot Albus, M.D., David Pickar, M.D., Theodore P. Zahn, Ph.D., Owen M. Wolkowitz, M.D., and Steven M. Paul, M.D.

The authors exposed 10 healthy human volunteers to the stress of loud (100 dB) noise under controllable and uncontrollable conditions on two separate days. Subjects reported higher self-ratings of helplessness, lack of control, tension, stress, unhappiness, anxiety, and depression; had greater hypothalamic-pituitary-adrenal axis function as measured by elevations in plasma adrenocorticotropic hormone; and had higher levels of sympathetic nervous system and electrodermal activity after the uncontrollable stress condition than after exposure to controllable stress. Thus, lack of control over even a mildly aversive stimulus can produce alterations in mood as well as neuroendocrine and autonomic nervous system changes in healthy subjects.

(Am J Psychiatry 1987; 144:1419–1425)

The role of life stresses in precipitating depression has been investigated in several clinical studies (1–7). Reviews of this literature (6, 7) reveal that the adverse life events most commonly associated with the onset of depression include death of a close family member, serious illness in self or close family member, loss of job, and/or marital separation. These adverse life events are often outside the control of the individual confronting them, and feelings of helplessness and lack of control may result or become exacerbated.

Received Jan. 12, 1987; revised June 24, 1987; accepted July 14, 1987. From the Section on Clinical Studies, Clinical Neuroscience Branch, NIMH, Bethesda, Md. Address reprint requests to Dr. Breier, Maryland Psychiatric Research Center, Box 21247, Baltimore, MD 21228.

A parallel body of research on the effects of ancon trollable and controllable stress in laboratory nimals (8–10) also suggests that lack of control over versive stimuli results in a variety of neurobiologi al and behavioral alterations. This phenomenon, ermed "learned helplessness," has been proposed as in anmal model of depression (8-11). Extensive st dies is animals have demonstrated that exposure to incontrollable stress has specific neurochemical are neuroendocrine consequences. These include central catecholamine depletion (12, 13), decreased γ-amu obutyric acid (GABA) release (14), lowered thres old to bicuculline-induced seizures (15), and altered 1 poths lamic-pituitary-adrenal (HPA) function (16-1 · . Such effects are not observed after exposure to rentical amounts of controllable stress. Alterations in HPA function following uncontrollable but not consollable stress are of particular interest because of the novi well-documented abnormality in HPA function observed in many depressed patients (20–22).

In the present study, we have attempted to bridge the clinical literature associating stress and the development of mood state alterations and the laboratory studies of controllable and uncontrollable stress. We have examined the behavioral, neuroendocree, and psychophysiological effects of brief stress in healthy volunteers. We assessed the effects of relatively brief exposure to uncontrollable stress, in contrast to identical amounts of controllable stress, on range of stress, anxiety, and depression; plasma leels of adrenocorticotropic hormone (ACTH); and extrodermal activity. We also present preliminary data regarding the effects of uncontrollable and controllable estress on plasma epinephrine and norepinephrine levels.

METHOD

Ten volunteers who had no family or personal history of psychiatric disorders and who were in good physical health as determined by a physical examination gave informed written consent and participated in the study. Six of the subjects were men and four were women. Their mean±SD age was 33±9 years.

Each subject participated in two alternately assigned tests on different days separated by 1 week. On the controllable stress test day, an aversive loud noise was administered and could be stopped if the subject learned a simple button push sequence. On the uncontrollable stress test day, the button responses did not stop the noise. The procedure was a modification of that reported in previous studies examining uncontrollable stress in humans (23, 24) and was controlled by a PDP-11 laboratory computer.

The noise stress consisted of exposure to 60 trials of loud pure tones (100 dB, 3000 Hz, maximum duration= 5 seconds) delivered through headphones. The mean± SD intertrial interval was 25 ± 10 seconds (range=10– 40 seconds). A push button was placed convenient to the subject's left hand. Two lights, one blue and one red, labeled "Subject-Out" and "Time-Out," respectively, were positioned in front and in clear view of the subject. In the controllable stress condition, four presses of the button stopped the noise. The button had a 0.5-second "stick" in the down position, which limited the rate at which it could be depressed so that a minimum noise burst was approximately 2 seconds long. If the noise was successfully stopped before 5 seconds, the blue light flashed for 2 seconds. If the subject failed to stop the noise, the red light flashed to indicate that the noise was automatically terminated.

The amount of noise stress was held constant in both conditions by "yoking" the duration of uncontrollable noise to the duration of controllable noise. The first subject and every alternate subject studied had the controllable noise on the first test day and the uncontrollable noise on the second test day. The noise durations experienced during the controllable stress trials were recorded and used for each subject's test day of exposure to uncontrollable stress. The alternating subjects were exposed to uncontrollable stress on the first test day and controllable stress on the second test day. Thus, each subject was used as his or her own control. To preserve randomization, each first-day uncontrollable noise was yoked to the durations of controllable noise of the preceding subject.

Following the noise stress, subjects were given a mental task consisting of 20 five-letter single-solution anagrams. A mental task was incorporated into the paradigm because animal studies have shown that deficits resulting from uncontrollable stress are manifested after the stress when the animal is challenged by a performance test. The five-letter anagrams were presented individually on 3×5 -inch index cards, and a maximum of 100 seconds was allowed to solve each anagram. Two different sets of anagrams were used,

one for each of the two test days. One set used the letter order 2-4-5-1-3 so that the word "paint" appeared as the anagram "antpi," and the other set used the letter order 4-2-1-5-3 so that the word "voice" appeared as "covei." Performance was scored by counting the number of anagrams successfully solved and the mean ±SD length of time it took to solve each word (25).

The procedures followed on the uncontrollable and controllable stress test days were identical. Subjects were seated at 2:00 p.m. in a quiet testing room and remained seated throughout the study, which ended at 4:15 p.m. After a 30-minute acclimation period, an intravenous catheter was inserted in the subject's right antecubital fossa and kept patent with a slow infusion of isotonic (0.9%) saline. Leads for the measurement of skin conductance, skin temperature, and heart rate were then attached. Thirty minutes later, the following instructions regarding the noise condition were read for both the uncontrollable and controllable stress conditions:

From time-to-time a loud noise will come on for a while through headphones. When that noise comes on there is something you can do to stop it. There are two lights located on the box in front of you. The lights will tell you how the noise on each trial was controlled. If you find the way to stop the noise then the blue light marked "Subject-Out" will momentarily flash on after each time you stop the loud noise. If you fail to stop the noise then the red light marked "Time-Out" will flash when the noise stops. Remember, when the blue light flashes on this means that you have stopped the noise. But, if the red light flashes, this means you did not stop the noise but it stopped automatically. Taking the earphones off or dismantling the apparatus is not the way to stop the noise. I can't answer any questions now. Once again, there is a way to stop the noise but it is up to you to figure out how.

After the 20th and 40th noise trial, a written message that read "continue to try hard" was presented to the subjects to encourage them to keep trying to stop the noise. At the completion of their exposure to noise, which took 30 minutes, subjects were given a 10-minute rest and rating period, which was followed by instructions regarding the mental task and the task itself, all of which took 15 minutes. Following the completion of the mental task, there was a 25-minute inactive period until the termination of the study.

The degrees of feelings of helplessness and control that subjects experienced during the noise stress were determined by administering a visual analogue self-rating scale at the end of the noise condition. This scale asked, "How helpless did you feel during the noise condition?" and "How much control did you feel you had over stopping the noise?" Subjects marked a 100-mm line scored from "not at all" to "extremely." A similar visual analogue self-rating scale scored on a 100-mm line to assess the mood states of tense, happy, and stressed was administered before and at the end of the noise stress and after the anagram task. The Profile of Mood States (POMS) (26), a self-rated inventory of

65 mood states scored from 0 (not at all) to 4 (extremely), was administered before the noise stress and after the anagram task.

Serial blood samples were collected through the intravenous catheter at the following intervals: 15 and 5 minutes before the noise condition; 5 and 15 minutes during noise exposure; at the end of the 30-minute noise condition; after the 10th anagram, which was 15 minutes after the end of the noise condition; and at the end of the study, which was 45 minutes after the end of the noise stress. Blood was collected in EDTAcontaining tubes and immediately placed on ice. Plasma, obtained within 30 minutes of collection by centrifuging whole blood (800 g for 10 minutes), was stored at -80 °C. ACTH was measured in triplicate from extracted plasma by radioimmunoassay (27, 28). The ACTH assay used was highly sensitive (the lowest level of detection was 1.9 pg/ml) and specific (the cross-reactivity with other peptides was less than 0.02%). All ACTH values in this study were determined from samples assayed in the same run.

Plasma was available to determine levels of epinephrine and norepinephrine in four subjects at the following points: baseline (before exposure to noise), after the 30-minute noise condition, during the mental task (45 minutes after the start of the noise condition), and at the end of the study. Samples were assayed from extracted plasma by high-pressure liquid chromatography with electrochemical detection (29, 30). Lowest levels of detection for epinephrine and norepinephrine were 3.1 pg/ml and 5.0 pg/ml, respectively (29).

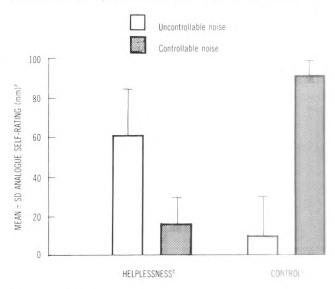
Two conventional indexes of electrodermal activity were measured bilaterally—mean skin conductance level and number of fluctuations per minute—in addition to mean heart rate and mean skin temperature (31). These were determined for the 2.5 minutes before the second through the seventh blood drawings. The two plasma ACTH values and the two values for each electrophysiological measure determined before exposure to noise were not significantly different and were averaged to yield baseline values for the time before exposure to noise.

Data were analyzed by a two-factor analysis of variance (ANOVA) with repeated measures (Condition [uncontrollable versus controllable stress] by Time) with repeated measures (32); adjusted degrees of freedom for repeated measures were used where appropriate. Because each subject participated in both conditions, the ANOVA assessed the data in a paired manner. Analogue mood scale items and ACTH data were further analyzed with post hoc Newman-Keuls tests and by paired t tests. Spearman's correlation coefficients were used for correlative analysis. All probability values are two-tailed.

RESULTS

All 10 subjects successfully stopped the noise during the controllable noise condition after a mean±SD of

FIGURE 1. Self-Ratings of Helplessness and Control by 10 Normal Volunteers After Exposure to Controllable and Uncontrollable Noise



^a0=none; 100=extreme.

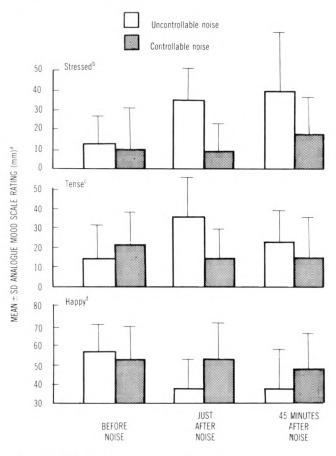
^bSignificant difference between conditions (F=24.7, df=1, 8, p< .005).

Significant difference between conditions (F=196.8, df=1, 8, p<.001).

4±3 trials. The mean±SD duration of exposure to noise per trial was 2.8±0.5 seconds. The subjects' self-ratings of feelings of helplessness during exposure to noise were significantly higher at the end of the uncontrollable noise condition than they were at the end of the controllable noise condition (figure 1). Their self-ratings of feelings of control were significantly higher after the controllable noise condition (figure 1).

The subjects' self-ratings of feeling stressed, tense, and happy were also significantly different for the two stress conditions (for feeling stressed, F=11.2, df= 2, 13, p<.005; for feeling tense, F=8.6, df=2, 13, p < .005; for feeling happy, F = 8.3, df = 2, 13, p < .02). Post hoc testing revealed that there were significant differences between the two stress conditions in the self-ratings of feeling stressed immediately after the noise exposure and 45 minutes after the noise exposure (figure 2). The ratings of feeling tense and happy were significantly different between conditions immediately after the noise exposure. The self-ratings of feeling stressed were significantly higher after exposure to uncontrollable noise than they were before this exposure (end of noise versus baseline) (figure 2). Self-ratings of feeling happy were significantly lower (figure 2). There were no significant differences in these variables between baseline ratings and ratings made after noise exposure in the controllable stress condition. Further, there were significant condition versus time effects for the POMS depression-dejection factor (F=13.6, df=1, 8, p=.006) and tension-anxiety factor (F=4.2, df=1, 8, p=.07), although the overall magnitude of depression-dejection ratings was relatively modest. There were no significant differences (condi-

FIGURE 2. Self-Ratings of Mood States by 10 Normal Volunteers During Controllable and Uncontrollable Noise Conditions



^a0=none; 100=extreme.

bSignificant difference between noise conditions just after noise (p<.01) and 45 minutes after noise (p<.01). For the uncontrollable noise condition, the stress rating was significantly higher just after noise (t=3.7, df=9, p=.005) and 45 minutes after noise (t=2.8, df=9, p=.08) than it was at baseline.

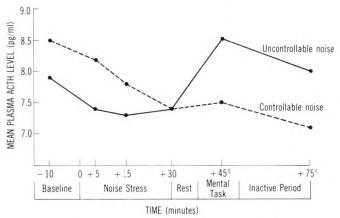
Significant difference between noise conditions just after noise (n < 0.5)

(p<.05). dSignificant difference between noise conditions just after noise (p<.05). For the uncontrollable noise condition, the happiness rating just after the noise was significantly lower than at baseline (t=3.0, df=9, p=.01).

tion versus time) between controllable and uncontrollable conditions for other POMS factors (angerhostility, F=1.6; vigor, F=0.2; fatigue, F=0.1; confusion, F=0.3). In contrast, exposure to controllable noise alone failed to alter mood ratings: there were no significant differences in ratings immediately after exposure to controllable noise or 45 minutes after such exposure compared with ratings made before such exposure (figure 2).

The behavioral changes resulting from exposure to uncontrollable stress were accompanied by increases in ACTH secretion. There were significant differences in ACTH secretion between the two conditions (F=5.6, df=2, 22, p=.006) (figure 3). ACTH levels were significantly higher in the uncontrollable stress condition than in the controllable stress condition at 15 minutes

FIGURE 3. Plasma ACTH Levels of 10 Normal Volunteers During Controllable and Uncontrollable Noise Conditions^a



^aSignificant Condition by Time interaction (F=5.6, df=2, 22, p=.006).

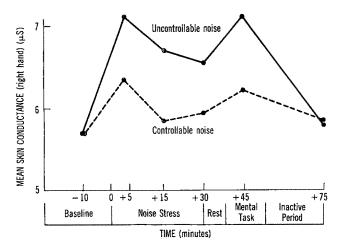
bt=2.4, df=9, p<.05, comparison between uncontrollable and controllable noise conditions.

ct=2.7, df=9, p<.05, comparison between uncontrollable and controllable noise conditions.

(during the mental task) and 45 minutes (at the end of the study) following cessation of the noise stress (figure 3). Although the magnitude of the ACTH rise was relatively modest, the uncontrollable stress ACTH levels 15 and 45 minutes after the exposure to noise were significantly higher than the uncontrollable stress ACTH levels at the end of the exposure to noise (t=2.4, df=9, p<.05; t=2.7, df=9, p<.05, respectively). There were no significant differences between the uncontrollable and controllable stress ACTH levels during the noise stress period. The peak change in ACTH levels (mental-task ACTH levels minus the end-of-noise ACTH levels) in the uncontrollable stress condition was significantly correlated with the peak change (end-of-noise values minus pre-noise values) in ratings of feeling stressed (r=.83, N=10, p=.003), happy (r=-0.64, N=10, p<.05), and tense (r=.61,N=10, p<.06). To further assess the ACTH data, we added the factors sex and day to the ANOVA to determine if the gender of the subjects and the order in which subjects participated in controllable versus uncontrollable stress affected the ACTH response. There were no significant gender (Condition by Time by Sex: F=0.86) or order (Condition by Time by Day: F=2.1) interactions.

Mean±SD plasma epinephrine levels in the uncontrollable stress condition during the mental task (38.2±15 pg/ml) were significantly higher than they were at the end of noise exposure (25.1±9 pg/ml) (t=3.7, df=3, p=.03). There were no significant changes in mean±SD plasma epinephrine level at other points in the uncontrollable stress condition (baseline: 26.6±9 pg/ml; end of study: 26.2±6 pg/ml) and no significant changes in mean±SD plasma epinephrine level during the controllable stress condition (baseline: 28.3±16 pg/ml; end of noise: 22.4±13 pg/ml; mental

FIGURE 4. Skin Conductance Levels of 10 Normal Volunteers During Controllable and Uncontrollable Noise Conditions^a



aSignificant Condition by Time interaction (F=3.7, df=2, 19, p<.04).

task: 31.1±23 pg/ml; end of study: 22.8±11.7 pg/ml). There were no significant changes in plasma norepinephrine levels in the uncontrollable and controllable conditions.

Skin conductance levels in the controllable and uncontrollable conditions were significantly different: the levels in the uncontrollable stress condition were higher than those in the controllable stress condition throughout the noise and mental task conditions (figure 4). Another index of electrodermal activity, the number of fluctuations of skin conductance, also showed a significant Condition by Time interaction (F=2.6, df=5, 40, p<.05); the largest differences between conditions, again, were during the noise exposure and mental task periods. There were no significant differences (condition versus time) between the uncontrollable and controllable stress conditions for measures of skin temperature or heart rate. The change in skin conductance level from baseline during the anagram task was significantly rank-correlated with the change in tension before and after exposure to noise $(\rho = .71, N=10, p<.05)$ and stress $(\rho = .68, N=10,$ p<.05) ratings. A Spearman rank-order correlation was used here because of skewed distribution of skin conductance levels.

There were no significant differences in anagram task performance between the uncontrollable and controllable stress conditions, respectively (mean \pm SD time per word: 21 \pm 11 versus 21 \pm 13, F=0.1, df=1, 8, p=0.9; number of incorrect words: 6 \pm 4 versus 7 \pm 5, F=1.2, df=1, 8, p=0.9).

DISCUSSION

The results of this study demonstrate that exposure to brief uncontrollable aversive stimuli produces greater alterations in mood as well as in HPA and sympathetic nervous system activity than exposure to identical amounts of controllable aversive stimuli. The uncontrollable stress condition resulted in hig er self-ratings of helplessness, stress, tension, anxiety, and depression and produced significantly different patterns of ACTH secretion that were highly correlated with many of these behavioral changes as well as elevations in plasma epinephrine levels and electrodermal activity.

These data are similar to those reported from various "learned helplessness" paradigms in animals, although there are also important differences between the human uncontrollable stress paradigm reported here and uncontrollable stress experiments in animals. In many animal studies (12, 13), both the magnitude and duration of stress exposure are greater than those used in this and other human studies. The latter may account for the more profound neurobiolog cal and behavioral changes in animals exposed to un ontrollable stress. Nevertheless, the determination or mood changes such as "depression" following uncon: "ollable stress in animals can be inferred only indirectly from behavioral observation and performance tasks whereas direct assessment of mood state changes is possible in humans. There are, however, several para lels between the results of this study and studies of uncontrollable stress in animals. In the rhesus monkey, higher levels of plasma cortisol and lower Livels of social activity were observed following exposu e to the stress of aversive uncontrollable noise (100 d 3) compared with baseline values and with levels of animals exposed to the stress of identical amounts of controllable noise (18, 19). Similar results have also been observed in rodents: significantly higher plasma levels of corticosterone have been observed following exposure to uncontrollable stress than following exposure to controllable stress (16).

Our finding that elevations in plasma A TH, a hormone with a plasma half-life of less than 10 minutes (33, 34), occurred 15 and 45 minutes after exposure to uncontrollable (but not controllable) stress suggests that increased ACTH secretion did not result solely from the immediate inability to terminate the aversive stimuli. Rather, the neurochem cal and neuroendocrine effects of uncontrollable stress appear to be sustained well beyond the cessation of the noise stress. Animal studies have shown, for example, that plasma corticosterone levels remain elevated up to 3 hours following the cessation of uncontrollable stress (16). Further, many of the physiological and behavioral deficits observed following exposure to uncontrollable stress are manifest only after challening the animal with a performance task or other mild stressor (8–10). Thus, in our study the mild stress associated with the mental task may have contributed to the elevations in levels of ACTH, epinephrine, and electrodermal activity observed following exposure to uncontrollable stress. It is interesting that these indexes did not appear to be influenced by the identica mental task following controllable stress. There were sustained elevations during uncontrollable noise exposure of skin conductance but not of ACTH levels, suggesting a dissociation between these measures during uncontrollable stress exposure. The fact that skin conductance is known to reflect tonic arousal may account for these differences (35).

In animals, the neurochemical changes associated with uncontrollable compared with controllable stress are only beginning to be understood. A decrease in the depolarization-induced release of GABA, a major inhibitory neurotransmitter, has been reported to occur following exposure to uncontrollable but not controllable stress in rats (14, 15), which results in a state of increased neuronal disinhibition lasting at least 2 hours following cessation of the stress (15). A similar disinhibitory state following uncontrollable stress in our subjects could explain the augmented ACTH release during a subsequent mental task, since enhancement of central GABA-ergic neurotransmission has been shown to have an inhibitory influence on HPA axis activity (36-38). In addition, changes in central catecholamine levels and turnover have also been reported following uncontrollable stress in rodents, and these changes appear to be related to both the motor and performance deficits of uncontrollable stress (12, 13). The increased plasma epinephrine and electrodermal activity during uncontrollable stress is consistent with this in that it suggests a greater sympathetic nervous system response to this condition.

Regardless of the exact neurochemical changes responsible for the behavioral, neuroendocrine, and electrodermal response to uncontrollable stress in our subjects, the results of our study bridge several largely independent and extensively investigated lines of research in human affective disorders. These include the abnormal HPA axis activation observed in many depressed patients (20-22) and the effects of "stress," particularly stressful life situations that engender feelings of helplessness, in precipitating depressive symptoms (1–7). Moreover, in our subjects the alterations in HPA axis function were correlated to the wellknown cognitive deficits that characterize many depressed patients (39). Further assessment of HPA axis response to the uncontrollable stress paradigm would be useful. For example, it would be interesting to determine if, following dexamethasone administration, uncontrollable stress results in cortisol nonsuppression, a phenomenon seen in some types of affective illness (20, 21). It will also be interesting to extend our paradigm to patients with various forms of affective disorders both while they are symptomatic and while they are in remission. Preliminary results (unpublished data of Breier et al.) suggest exaggerated behavioral and neuroendocrine changes following uncontrollable stress in patients with unipolar and bipolar disorders compared with healthy volunteers. We conclude that the human paradigm for exposure to uncontrollable stress described here may be a useful tool to examine the neurobiological correlates of mood in normal volunteers and psychiatric patients.

REFERENCES

- Brown GW, Harris TO, Peto J: Life events and psychiatric disorders, II: nature of causal links. Psychol Med 1973; 3:159– 176
- Paykel ES, Myers JK, Dienelt MN, et al: Life events and depression: a controlled study. Arch Gen Psychiatry 1969; 21: 753-760
- Leff MJ, Roatch JF, Bunney WE: Environmental factors preceding the onset of severe depression. Psychiatry 1970; 33:298

 311
- Thomson K, Hendric H: Environmental stress in primary depressive illness. Arch Gen Psychiatry 1972; 26:130–132
- Goodwin FK, Bunney WE: Psychobiological aspects of stress and affective illness, in Separation and Depression: Clinical and Research Aspects. Edited by Scott JP, Senay EC. Washington, DC, American Association for the Advancement of Science, 1973
- Paykel ES: Life events and early environment, in Handbook of Affective Disorders. Edited by Paykel ES. New York, Guilford Press. 1982
- Lloyd C: Life events and depressive disorder reviewed, II: events as precipitating factors. Arch Gen Psychiatry 1980; 37:541– 548
- Anisman H: Vulnerability to depression: contribution of stress, in Neurobiology of Mood Disorders, vol 1. Edited by Post RM, Ballenger JC. Baltimore, Williams & Wilkins, 1984, p 407
- 9. Weiss JM, Simson PG: Neurochemical basis of stress-induced depression. Psychopharmacol Bull 1985; 21:447–457
- Seligman MEP, Maier SF: Failure to escape traumatic shock. J Exp Psychol 1967; 74:1–9
- Seligman MEP, Klein DC, Miller WR: Depression, in Handbook of Behavior Modification and Behavior Therapy. Edited by Leitenberg H. Englewood Cliffs, NJ, Prentice-Hall, 1976
- 12. Weiss JM, Goodman PA, Losito BG, et al. Behavioral depression produced by an uncontrollable stressor: relationship to norepinephrine, dopamine and serotonin levels in various brain regions. Brain Research Rev 1981; 3:167–205
- Anisman H, Pizzino A, Sklar LS: Coping with stress, norepinephrine and escape performance. Brain Res 1980; 191:583

 588
- 14. Petty F, Sherman AD: GABAergic modulation of learned help-lessness. Pharmacol Biochem Behav 1981; 15:567–570
- Drugan RC, McIntyre TD, Alpern HP, et al. Coping and seizure susceptibility: control over shock protects against bicucullineinduced seizures. Brain Res 1985; 342:9–17
- Swenson RM, Vogel WH: Plasma catecholamine and corticosterone as well as brain catecholamine changes during coping in rats exposed to stressful foot shock. Pharmacol Biochem Behav 1983; 18:689-693
- 17. Davis H, Porter JW, Livingstone J, et al: Pituitary-adrenal activity and lever press shock escape behavior. Physiology and Psychology 1977; 5:280–284
- 18. Hanson JD, Larson ME, Snowdon CT: The effects of control over high intensity noise on plasma cortisol levels in rhesus monkeys. Behav Biol 1976; 16:333–340
- Nealis PM, Bowman RE: The Effects of Man-Made Noise on Social Behaviors and Plasma Cortisol Levels of Rhesus Monkeys: National Science Foundation Final Report, Grant 64-9634. Washington, DC, NSF, 1972
- Carroll BJ, Curtis GC, Mendels J: Neuroendocrine regulation in depression, II: discrimination of depressed from nondepressed patients. Arch Gen Psychiatry 1976; 33:1051–1058
- 21. Carroll BJ, Feinberg M, Greden JF, et al: A specific laboratory test for the diagnosis of melancholia: standardization, validation, and clinical utility. Arch Gen Psychiatry 1981; 38:15–22
- 22. Pfohl B, Herman B, Schlechte J, et al: Piruitary-adrenal axis rhythm disturbances in psychiatric depression. Arch Gen Psychiatry 1985; 42:897–903
- Hiroto DS: Locus of control and learned helplessness. J Exp Psychol 1974; 102:187–193

- 24. Gatchel RJ, Proctor DJ: Physiologic correlates of learned help-lessness in man. J Abnorm Psychol 1976; 85:27–34
- Tresselt ME, Mayzner MS: Normative solution times for a sample of 134 solution words and 378 associated anagrams. Psychonomic Monograph Supplement 1966; 1:293–299
- McNair DM, Lorr M, Droppleman LF (eds): Profile of Mood States. San Diego, Educational and Industrial Testing Service, 1971
- Chrousos GP, Schulte HM, Oldfield EH, et al: The corticotropin-releasing factor stimulation test. N Engl J Med 1984; 310: 622-626
- Orth DN: Adrenocorticotropin hormone, in Methods of Hormone Radioimmunoassay. Edited by Jaffe BM, Behrmen HR. New York, Academic Press, 1979
- Caliguri EJ, Mefford IN: Femtogram detection limits of biogenic amines using microbore HPLC with electrochemical detection. Brain Res 1984; 296:156–159
- Seppala T, Scheinin M, Capone A, et al: Liquid chromatographic assay for CSF catecholamines using electrochemical detection. Acta Pharmacol Toxicol 1984; 55:81–87
- Zahn TP, Schooler C, Murphy DL: Autonomic correlates of sensation seeking and monoamine oxidase activity: using confirmatory factor analysis on psychophysiological data. Psychophysiology 1986; 23:521-531

- 32. Dixon WJ (ed): BMDP Statistical Software. Berkeley, University of California Press, 1983
- 33. Nicholson WE, Liddle RA, Puett D, et al: Adrenocorticotropic hormone biotransformation, clearance and catabolism. Endocrinology 1978; 103:1344–1351
- 34. Cowan JS, Davis AE, Layberry RA: Constancy and 'mearity of the metabolic clearance of adrenocorticotropin. Can: J Physiol Pharmacol 1974; 52:8-13
- Zahn TP: Psychophysiological approaches to psycho athology, in Psychophysiology: Systems, Processes and Applications. Edited by Coles MGH, Donchin E, Porges SW. New York, Guilford Press, 1986
- 36. Makara GB, Stark E: Effect of GABA agonist drugs on ACTH-release. Neuroendocrinology 1974; 16:178–190
- 37. Jones MT, Hillhouse EW, Burden J: Effect of various putative neurotransmitters on the secretion of corticotropin-r. lease hormone from the rat hypothalamus in vitro; a model of the neurotransmitters involved. J Endocrinol 1976; 69:1-10
- 38. Acs Z, Stark E: Possible role of gamma-aminobi tyric acid synthesis in the mechanism of dexamethasone feedb. ck action. J Endocrinol 1978; 77:137-141
- 39. Beck AT, Rush AJ, Shaw BF, et al: Cognitive Therapy of Depression. New York, Guilford Press, 1981

Deceased Members of the American Psychiatric Association

The deaths of these members were reported to APA between June 11 and Aug. 18, 1987.

David D. Baden Karolina Bein Richard B. Brown Lubomyr Bylow John M. Caldwell Fortunato G. Castillo Natalio Chudnovsky James M. Cunningham Edward T. Edwards Joseph Epstein Mayer Fisch
Harry Gershman
Alfred H. Hill
Raymond M. Hollander
Hans Langhammer
Howard Lederer
Pennamma Jose Menachery
William A. Nixon
Rudolf E. Nobel
Thomas P. Rogers

David Roth
Fred Lewis Schartenberg
Albert M. Sherman
Herman B. Snow
Aloysious F. Tasch
William B. Terhune
Fredric Wertham
Morton H. Zwerling

Childhood Sexual and Physical Abuse as Factors in Adult Psychiatric Illness

Jeffrey B. Bryer, Ed.D., Bernadette A. Nelson, Ph.D., Jean Baker Miller, M.D., and Pamela A. Krol, B.A.

Using objective measures, the authors found a high rate of childhood sexual and physical abuse in a sample of 66 female psychiatric inpatients. Childhood abuse experiences were correlated with severity of adult psychiatric symptoms. The authors explore the usefulness of adult psychological symptoms, diagnoses, and prescribed medications as factors in the identification of patients who have histories of early sexual and physical abuse.

(Am J Psychiatry 1987; 144:1426–1430)

linical and research reports (1–6) indicate that childhood physical and sexual abuse is more common among adults who develop major mental illness than previously suspected. Abuse may be a hidden feature in patients who are classified among the most difficult to diagnose and treat (1-6). Carmen et al. (4) and Mills et al. (5), in a study of psychiatric inpatient charts, demonstrated a relationship between history of abuse and certain indicators of the severity of psychiatric symptoms. They also discovered histories of physical and/or sexual abuse in 43% of the patients they studied (53% of the women and 23% of the men) and explored the factors linking "victim to patient." Psychotherapy patients with a history of abuse rarely disclose these experiences to therapists, and therapists rarely ask about the possibility of abuse (1, 4, 6).

Presented at the annual conferences of the American College of Neuropsychopharmacology, Maui, Hawaii, Dec. 9–13, 1985, the American Psychological Association, Washington, D.C., Aug. 22–25, 1986, and the National Association of Private Psychiatric Hospitals, Bal Harbour, Fla., Jan. 26–29, 1987. Received Feb. 14, 1986; revised Nov. 24, 1986, and May 22, 1987; accepted June 8, 1987. From the Charles River Hospital; the Division of Psychiatry, Boston University School of Medicine; and the Stone Center for Developmental Studies and Services, Wellesley College, Wellesley, Mass. Address reprint requests to Dr. Bryer, Charles River Hospital, 203 Grove St., Wellesley, MA 02181.

Supported by research development funds from the Stone Center for Developmental Studies and Services.

The authors thank Ethan S. Rofman, M.D., Patricia Rieker, Ph.D., Joseph Pleck, Ph.D., Herb Kayne, Ph.D., and Conan Kornetsky, Ph.D. for their assistance.

Copyright © 1987 American Psychiatric Association.

In the study reported here, we investigated 1) the rates of childhood abuse in a sample of adult inpatients, 2) correlations between early abuse and the severity of symptoms in adulthood, and 3) the usefulness of adult psychiatric symptoms, diagnoses, and medications as factors in the identification of patients who have been abused in childhood. Although this study focuses on childhood abuse, later abuse was also investigated as a compounding factor. The implications of these objective findings for clinical work and training are also discussed.

METHOD

The study plan called for inclusion of a consecutive series of all patients admitted to a private psychiatric hospital. An insufficient number of eligible male patients led to the exclusion of all male subjects from the study. Of the 172 female patients admitted, 124 met eligibility requirements and 68 agreed to participate. The criteria for eligibility included being female, 18–64 years of age, and free of organic dysfunction and toxic reactions to drugs and alcohol; fluency in English; and ability to give informed consent and to participate following a description of the study. Most subjects were Caucasian, employed, unmarried, and Roman Catholic, and most had some postsecondary education. The mean±SD age of the patients was 31.8 ± 11.1 years.

Of the 56 eligible patients who chose not to participate, 11 (20%) exhibited guardedness or paranoia, 26 (46%) did not want to do anything more than that which was required for their treatment, and 19 (34%) gave no reason for their lack of participation. These 56 patients did not differ from the 68 patients in the study group in age, diagnosis, and SCL-90-R (7) scores.

Each subject completed a self-administered questionnaire covering her own and her family's social, psychological, and medical histories, including all major disruptions and traumata (e.g., illness, death, divorce, or imprisonment). Histories of early and later sexual abuse were identified by responses to the following question: "Before [or after] you were 16 years old, did any of the following people ever pressure you into doing more sexually than you wanted to do (by

sexually we mean being pressured against your will into forced contact with the sexual parts of your body or his/her body)?" Histories of early and later physical abuse were identified by answers to the following question: "Everyone gets into conflicts with other people and sometimes these lead to physical blows such as hitting really hard, kicking, punching, stabbing, throwing someone down, etc. Before [or after] you were 16, did any of the following people do that to you?" Each of these questions was followed by a list of potential perpetrators, including father, mother, brother, sister, friend, and acquaintance. In this study, early abuse was defined as abuse before age 16; later abuse was defined as that occurring at age 16 or after.

All subjects were administered the SCL-90-R (7) and, in a process independent of the study, 47 of the 68 subjects received the Millon Clinical Multiaxial Inven-

tory (8) as part of their clinical workup.

Medical records were reviewed to obtain data on diagnoses, suicidal symptoms, and psychotropic medications. *DSM-III* diagnoses were made by attending psychiatrists at the time of hospital discharge. Subjects who received a course of medication during hospitalization and who were prescribed medications as part of their outpatient treatment plan were operationally defined as medicated.

Two-way analyses of variance (ANOVAs) were used to evaluate the effects of early physical and sexual abuse on the SCL-90-R variables. One-way ANOVAs were used with the Millon inventory data because none of the 47 subjects who received this inventory had experienced physical abuse only. Discriminant function analyses were used to determine how well the test variables could discriminate abused from non-abused subjects.

Background variables contributing to the severity of adult symptoms were identified by multivariate regression analysis; the global severity index of the SCL-90-R was the dependent variable.

Logistic regression analysis was used to examine the relationships between childhood abuse and adult diagnoses, suicidal symptoms, substance abuse, prescribed medications, and family data.

Relationships between early and later physical and sexual abuse were examined by McNemar chi-squares. The differential effects of incest versus other early sexual abuse on SCL-90-R and Millon inventory variables were evaluated by using t tests.

RESULTS

Rates of Abuse

Sixty-six of the 68 subjects completed the abuse history portion of the questionnaire; the two subjects who did not complete this portion were dropped from the study. Forty-eight (72%) of the 66 women reported a history of abuse at some time during their lives. Fourteen (21%) reported sexual abuse only, 12

(18%) reported physical abuse only, and 22 33%) reported both types of abuse.

Thirty-nine (59%) of the 66 women experienced abuse before age 16: 14 (21%) reported sexual abuse only, 10 (15%) reported physical abuse only. In d. 15 (23%) reported both types of early abuse. Thirt eight (58%) of the 66 women experienced abuse at age 16 or later: nine (14%) reported sexual abuse or 7, 16 (24%) reported physical abuse only, and 13 (20%) reported both types of later abuse.

Fifteen (52%) of the 29 patients reportine early sexual abuse also reported later sexual abuse, and 20 (80%) of the 25 subjects reporting early physical abuse reported later physical abuse; however, these autionships were not statistically significant.

Relationships Between Abusers and Victims

Thirty-seven perpetrators were named by the 29 subjects reporting early sexual abuse: 15 (52% of the 29 women reported abuse by family member those frequently fathers (N=6) and brothers (N=6). Other perpetrators, listed in order of frequency, were acquaintances, other unspecified individuals, dates, strangers, and persons in authority. Wenty nine perpetrators were named by the 22 reporting later sexual abuse: six (27%) of these women reported abuse by nuclear family in these other abusers included friends, dates, strangers, per sons in authority, husbands, and lovers. All propetrators of sexual abuse were male.

Forty-one perpetrators were named by the 5 subjects reporting early physical abuse: fathers (N=13) siblings (N=11), and mothers (N=7) were named most frequently. Thirty-four perpetrators were named by the 29 subjects reporting later physical abuse spouses or lovers (N=17) were named most frequently, followed by fathers (N=6), brothers N=4, strangers, mothers, and others.

Abuse Status and Adult Psychiatric Symptom.

Two-way ANOVAs revealed significant differences among the four early abuse groups on all of the SCL-90-R variables; however, when the Both ferronic correction for multiple comparisons was applied, the obsessive-compulsive and hostility variables etc. no longer significant. The mean scores for each of explained variance are presented in table 1. The impact of experiences of both physical and sexual all use was additive—no significant interaction effects we explained variance are presented in table 1. The impact of experiences of both physical and sexual all use was additive—no significant interaction effects we explain the subjects who experienced physical abuse or longer in the subjects who had not been abused; subjects who had experienced both types of abuse had even higher mean scores (table 1).

The results of one-way ANOVAs of Mile invertory variables across the three groups of subjects who reported no abuse, sexual abuse only, or bosexual

TABLE 1. SCL-90-R Scores of 66 Female Psychiatric Inpatients Who Either Had or Had Not Experienced Sexual and/or Physical Abuse Before Age 16

SCL-90-R Subscale	No Abuse (N=27)		Physical Abuse Only (N=10)		Sexual Abuse Only (N=14)		Sexual and Physical Abuse (N=15)		F	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	(df=3, 62)	p
Somatization	42.41	8.83	46.20	11.98	48.00	7.89	52.60	6.06	4.64	.005a
Obsessive-compulsive	44.81	9.53	50.00	10.75	47.64	7.37	54.93	7.91	4.23	.009
Interpersonal sensitivity	42.56	11.16	49.50	11.53	48.57	9,48	56.67	7.88	6.24	.001a
Depression	45.04	9.94	50.10	10.32	49.71	8.72	57.60	8.23	5.77	.002a
Anxiety	43.07	9.54	48.60	9.11	48.29	10.69	59.33	10.20	8.71	.0001a
Hostility	42.67	10.39	46.00	7.16	47.64	10.83	54.47	6.57	4.37	.007
Phobic anxiety	41.37	9.98	49.80	10.88	44.64	8.34	56.07	10.87	7.45	.0002a
Paranoid ideology	43.19	10.39	47.10	10.59	48.93	9.15	57.40	6.59	7.38	.0003a
Psychoticism	41.81	8.27	47.40	8.40	45.86	8.75	58.00	8.83	11.74	.0001 ^a
Global severity index	42.70	8.63	48.50	9.71	48.4 3	7.93	56.73	7.91	8.80	.0001a

^aSignificant after application of Bonferroni correction for multiple comparisons.

TABLE 2. Mean Millon Clinical Multiaxial Inventory Scores of 47 Female Psychiatric Inpatients Who Either Had or Had Not Experienced Sexual and Physical Abuse Before Age 16

Millon Inventory	No Abuse (N=19)		Sexual Abuse Only (N=14)		Physica	al and I Abuse =14)	F	
Variable	Mean	SD	Mean	SD	Mean	SD	(df=2, 44)	p
Schizoid	58.42	27.08	59.71	31.76	67.36	35.42	0.36	.70
Avoidant	61.74	25.04	71.93	30.07	82.29	31.40	2.10	.13
Dependent	67.00	29.29	71.86	24.47	78.93	29.50	0.73	.49
Histrionic	50.79	26.92	50.79	28.72	42.35	35.51	0.38	.68
Narcissistic	49.79	26.94	46.36	27.76	44.50	33.33	0.14	.87
Antisocial	46.21	21.75	46.50	19.29	51.21	21.15	0.27	.77
Compulsive	62.11	15.27	51.29	23.57	44.64	24.95	2.90	.07
Passive-aggressive	53.26	27.41	67.07	31.32	77.07	33.08	2.56	.09
Schizotypal	54.68	12.14	58.93	24.03	65.64	23.54	1.23	.30
Borderline	62.63	10.66	77.14	13.91	80.36	19.21	7.08	.002ª
Paranoid	45.63	27.29	60.64	12.07	65.57	11.28	4.71	.01
Anxiety	77.32	21.25	91.00	16.29	92.50	19.11	3.20	.05
Somatoform	63.68	9.68	74.36	15.89	76.57	15.04	4.46	.02
Hypomania	27.95	30.79	48.14	33.22	59.00	36.52	3.73	.03
Dysthymia	75.26	24.02	85.64	24.50	88.07	30.91	1.12	.33
Alcohol abuse	57.47	18.38	58.14	20.24	65.57	15.41	0.92	.41
Drug abuse	46.26	27.49	56.50	24.26	63.79	24.81	1.92	.16
Psychotic thinking	54.05	22.18	65.93	18.78	70.79	16.10	3.25	.05
Psychotic depression	58.47	12.69	65.07	21.42	71.00	19.52	2.04	.14
Psychotic delusion	54.89	21.87	56.14	16.73	60.93	6.96	0.53	.59

^aSignificant after application of Bonferroni correction for multiple comparisons.

and physical abuse are presented in table 2. After the Bonferroni correction for multiple comparisons had been applied, only the differences on the borderline scale were statistically significant.

Differential effects of early incest (15 subjects) relative to other early sexual abuse (14 subjects) were not detected on any of the SCL-90-R or Millon inventory scales (two-tailed t tests, p>.05).

Two discriminant function analyses were conducted with childhood abuse as the independent variable. The SCL-90-R analysis (Wilks's lambda=0.759, df=3, p=.0006), involving data from all 66 subjects, included the obsessive-compulsive, global severity index, and positive symptom distress index variables and correctly classified 48 (72.7%) of the subjects. The discriminant function of Millon inventory data

(Wilks's lambda=0.499, df=6, p=.0002) included borderline, paranoia, alcohol, narcissistic, hypomanic, and drug variables and correctly classified 42 (89.4%) of the 47 subjects.

A multiple regression analysis was conducted with the SCL-90-R global severity index as the dependent variable and the background and traumatic factors as independent variables. The only significant variables and their percentages of the global severity index variance were early sexual abuse (21.4%), father's alcohol abuse (10.2%), and early physical abuse (7.3%). Overall, R²=38.9%.

Thirty-two (82%) of the 39 subjects who had experienced early abuse versus 14 (52%) of the 27 nonabused subjects received medications ($\chi^2=5.53$, df=1, p=.019).

A logistic regression analysis exploring the relationships between childhood abuse and adult diagnoses, suicidal symptoms, substance abuse, prescribed medications, and family background data selected only the adult suicidal symptom variable and was significant at p=.032. Odds analysis of this sample of patients indicated that subjects with suicidal ideation, gestures, and/or attempts were 3.13 times more likely to have been abused in childhood than were subjects without these symptoms (90% confidence level range=1.30–7.54).

Although not significant in the preceding analysis involving childhood abuse of any type, borderline personality disorder was the most frequent axis II diagnosis among the 29 subjects who had experienced early sexual abuse (either with or without accompanying physical abuse). Of the 14 subjects with borderline personality disorder, 12 had experienced early sexual abuse. These 12 patients represented 41% of the patients who had experienced early sexual abuse; in contrast, only two (7%) of the 27 patients who had not been abused were diagnosed as having borderline personality disorder. A 2 by 2 chi-square analysis of early sexual abuse versus no abuse by borderline personality disorder versus other personality disorders found a significant difference (χ^2 =6.89, df=1, p=.009).

DISCUSSION

The finding that almost three-quarters of our subjects had been physically and/or sexually abused at some time during their lives is striking. This rate is higher than those found in previous reports for female inpatients (4, 9, 10). This discrepancy may be due to such differences in methodology as using a direct questionnaire rather than chart review. Also important is the finding that perpetrators of early abuse were often members of the nuclear family, usually fathers or stepfathers and/or brothers.

Although the effectiveness of a questionnaire methodology for studies of this type has been demonstrated, this method has obvious limitations. For example, our results probably underestimate the incidence of abuse because many of the disturbed potential subjects could not give informed consent or complete a self-report instrument. Our results indicate that the more severely disturbed patients were more likely to have been abused in childhood; thus, inclusion of more disturbed subjects might have further elevated the rates and correlations with symptom severity. Also, suppression and repression of memories of these traumatic events may have been factors in some eligible subjects' choosing not to participate after reading a description of the study.

The correlation of the severity of adult psychiatric symptoms with childhood physical and sexual abuse is the most important finding. This finding is consistent with other reports (4, 5, 11, 12) and bears further investigation. These results suggest that victims of

childhood abuse continue to experience longs anding negative consequences of abuse. The discriminant function and logistic regression analyses demonstrated that aspects of functioning related to these longstanding negative consequences could be used to aid in the identification of patients with a history of abuse.

The adult psychiatric problems associated with childhood abuse appear to be more severe went the patient has experienced more than one type of abuse. Victims of both sexual and physical abuse ofter abuse is the easier to describe details of physical abuse that abuse; therefore, some of the patients reporting only physical abuse may also have been sexually bused. For immediate clinical relevance, however, it is souse to suggest that clinicians continue to ask about sexual abuse when patients reveal physical abuse.

This study contradicted another finding (12 in not detecting significant differences in symptoms 1 tween subjects who experienced incest and those who experienced other childhood sexual abuse. This screpancy may be explained by the fact that coldinoc sexual abuse of any kind can be very deletered as (13 and/or it might have been due to our sample size or method.

The higher proportion of diagnoses of bo derline personality disorder in the sexually abused ξ oup is consistent with other findings (11, 14) and with our finding of more frequent suicidal symptoms in the sexually abused group. These results raise questions about the etiology, delineation, and treatment of people given the diagnosis of borderline personal to disorder.

The greater use of psychotropic medications in adults who have a history of abuse may be due to greater severity of symptoms or to their presenting in a more atypical or unusual manner.

It is interesting to note that SCL-90-R scor s from nonabused subjects were significantly below the impatient psychiatric norms and that scores from subjects who had experienced both sexual and physical abuse were significantly above these norms (mean $\pm 51 = 50 \pm 10$). This finding suggests the need for further revestigation of childhood abuse as a possible hidden factor in the determination of norms for this instrument and possibly others.

Taken together, these findings suggest the adult female psychiatric inpatients with a history of abuse differ from similar but nonabused inpatients on the following characteristics. They have more sever and possibly psychotic or psychotic-like acute synotoms; they have more borderline diagnoses and of tracter features; they have more suicidal symptom, and, finally, they are given pharmacological treatment more often.

CONCLUSIONS

Abuse has profound deleterious effects on sychological functioning (1, 4, 6, 15). The usual secrecy and

denial of the abuse in the family render the child unable to deal with severe trauma in interaction with those adults on whom she must rely (2). The child is simultaneously forced to deal with overwhelming emotions and to deny a large part of reality.

Both clinical experience and these data suggest that the most distressed patients in the hospital may have been abused as children. They present clinicians with puzzling dilemmas which result not only from the severe original trauma but also from the subsequent secrecy and denial that distort the victim's significant relationships, including those with professionals. Extreme confusion and shame render patients particularly unable to initiate disclosure of abuse; professionals' not initiating discussion of the topic can transmit a message confirming patients' belief in the need to deny the reality of their experience. Patients' attempts to deal with their distress, then, can take even more indirect paths, leading to the development of severe and confusing symptoms.

This study does not include the more extensive qualitative investigations necessary to advance clinical understanding of the "victim-to-patient" links (4, 5). Until more knowledge is available, several authors (6, 14, 16–18) have suggested that further understanding as well as greater accuracy will be encouraged by diagnosing abused patients initially as suffering from posttraumatic stress disorder rather than character disorder or psychosis. It follows that instituting psychological and pharmacological therapies without knowing about the original trauma would be like treating the varied and chaotic symptoms of the Vietnam veteran without knowing about Vietnam or what happened there.

These results support the recommendations of others (4, 6, 14) that patients be asked specifically about abuse at their initial interviews. Equally important is the creation of a knowledgeable and receptive climate because patients often have repressed or suppressed memories of the abuse. The memories emerge only after a period of contact with sensitive clinicians. However, many clinicians are uncomfortable about discussing this topic. Most have not received training for it, especially for dealing with the difficult subjective reactions it evokes in the professional.

Even in the face of extreme violation, some individ-

uals develop sufficient psychological resources to survive childhood abuse without professional help. Others, however, become outpatients or inpatients and often present a puzzling array of symptoms. Although more refined information awaits further studies, the findings reported here have immediate clinical relevance.

REFERENCES

- 1. Herman J: Father-Daughter Incest. Cambridge, Harvard University Press, 1981
- 2. Summit R: Beyond belief: the reluctant discovery of incest, in Women in Context. Edited by Kirkpatrick M. New York, Plenum, 1981
- 3. Tiza V: Incest, in The Woman Patient, vol 3: Aggression, Adaptations, and Psychotherapy. Edited by Notman MT, Nadelson CC. New York, Plenum, 1982
 4. Carmen E(H), Ricker PP, Mills T: Victims of violence and
- psychiatric illness. Am J Psychiatry 1984; 141:378-383
- 5. Mills T, Rieker P, Carmen E: Hospitalization experiences of victims of abuse. Victimology 1984; 9:436-459
- 6. Gelinas D: The persisting negative effects of incest. Psychiatry 1983: 46:312-332
- 7. Derogatis LR: SCL-90-R Administration, Scoring, and Procedures Manual, II. Towson, Md, Clinical Psychometric Research, 1983
- 8. Millon T: Millon Clinical Multiaxial Inventory, 3rd ed. Minneapolis, Interpretive Scoring Systems, 1983
- 9. Emslie GJ, Rosenfeld A: Incest reported by children and adolescents hospitalized for severe psychiatric problems. Am J Psychiatry 1983; 140:708-711
- 10. Hussain A, Chapel JL: History of incest in girls admitted to a psychiatric hospital. Am J Psychiatry 1983; 140:591-593
- Brooks B: Familial influences in father-daughter incest. J Psychiatr Treatment and Evaluation 1982; 4:117–124
- 12. Sedney MA, Brooks B: Factors associated with a history of childhood sexual experiences in a nonclinical female population. J Am Acad Child Psychiatry 1984; 23:215-218
- 13. Kempe H: Sexual abuse, another hidden pediatric problem: the 1977 C Anderson Aldrich lecture. Pediatrics 1978; 62:382-389
- 14. Herman J: Histories of violence in an outpatient population: an exploratory study. Am J Orthopsychiatry 1986; 56:137-141
- 15. Herman J: Recognition and treatment of incestuous families. Int J Family Therapy 1983; 5:81–91
 16. Lindberg F, Distad L: Post-traumatic stress disorders in women
- who experienced childhood incest. Child Abuse Negl 1985; 9:329-334
- 17. van der Kolk B, Greenberg M, Boyd H, et al: Inescapable shock, neurotransmitters, and addiction to trauma. Biol Psychiatry 1985; 20:314-325
- 18. van der Kolk B: The psychological consequences of overwhelming life experiences, in Psychological Trauma. Edited by van der Kolk B. Washington, DC, American Psychiatric Press, 1986

Abused to Abuser: Antecedents of Socially Deviant Behaviors

Ann W. Burgess, R.N., D.N.Sc., Carol R. Hartman, R.N., D.N.Sc., and Arlene McCormack, Ph.D.

The authors interviewed 34 young people who had been sexually abused as children 6 or 8 years after the abuse had occurred and compared them with 34 control subjects who had not been abused. They also compared subjects who had been abused for less than 1 year with those who had been abused for more than 1 year. The findings suggest a link between childhood sexual abuse and later drug abuse, juvenile delinquency, and criminal behavior. The authors explore the effects of pretrauma factors of previous childhood physical abuse and parental modeling of aggression and the postdisclosure factors of social and family blaming.

(Am J Psychiatry 1987; 144:1431–1436)

The psychodynamic impact of memories of child-hood sexual trauma on symptoms of hysteria was described by Freud in 1896 (1). In 1963 Gleuck (2) uncovered traumatic consequences of incestuous episodes in a clinical population of schizophrenic patients receiving ECT. More recently, researchers using retrospective techniques have studied histories of childhood abuse in hospitalized psychiatric patients (3), outpatient psychiatric populations (4), suicidal persons (5), sex offenders (6, 7), juvenile sex offenders (8), and prostitutes (9, 10). In speculating on a link between childhood sexual abuse and internalizing processes, Rieker and Carmen (11) reconceptualized the "victim to patient" process as an interplay among abuse events, family relationships, and other life contexts. They emphasized that a fragmented identity is derived from accommodations to the judgments of others

about the abuse and that the patient's original cofenses form the core of the survivor's later psychopat :ology.

Using a prospective sample of children was had been victims of sexual abuse, in this paper .e will examine symptoms and behaviors that manifested themselves intermittently and chronically from the initial abuse period through different follow-to periods. We were particularly interested in unders anding what may operate in conjunction with sexua: abuse that leads to the externalizing behaviors of drug use. juvenile delinquency, and criminal behavior.

METHOD

Sample

Between 1976 and 1978 we studied six instances of multiple child victims sexually abused by ore adult (12). These six solo rings involved 36 children. In 1978-1981, we studied five additional instances of multiple child victims sexually abused by several adults who recruited and abused the children, produced pornography, and established a network of customers (13). These five syndicated and/or transition if rings involved 30 children. In 1984, we began to recontact the 66 young people who had been abused and their families. Eleven (17%) of the families could not be located. Of the 55 located, the interview was refused by two state agencies (in one case both the gran parent and the youngster were willing to be interviewed; in the other case the girl had been psychiatrically hospitalized for 3 years), 14 parents (we received no data regarding the youngsters' willingness to be interviewed), and four youngsters (they refused after their parents agreed). Thirty-five (53%) of the one hal 66 children agreed to participate in the interview. One of these youngsters, who had originally denied being sexually abused in a ring, continued his denial and was not included in the study. Thus, 34 (52%) of the 66 sexually abused youngsters are reported on here.

The present study assesses these young people by comparing them with control groups of nor abused youngsters. We had originally intended to use a single control group of non-sexually-abused siblings for all 34 subjects. However, one of the characteristics of sex rings is that children are used to recruit other children into the ring and children often recruit their eblings.

Support for data collection and analysis was provided by Department of Justice grant 84-JN-AX-K010 from the Office of Juvenile

Justice and Delinquency Prevention.

The authors thank Maureen P. McCausland and Patricia Powers for assistance in data collection, Peter Gaccione for computer analysis, and Robert A. Prentky for suggestions on statistics.

Copyright © 1987 American Psychiatric Association.

Received April 18, 1986; revised Nov. 3, 1986, and March 17, 1987; accepted April 13, 1987. From the University of Pennsylvania School of Nursing; the Graduate Program in Psychiatric Mental Health Nursing, Boston College School of Nursing, Chestnut Hill, Mass.; and the Department of Sociology, University of Lowell, Lowell, Mass. Address reprint requests to Dr. Burgess, Psychiatric Mental Health Nursing, University of Pennsylvania School of Nursing, Philadelphia, PA 19104-6096.

When this had occurred in our sample, we selected another control subject from the school that the victim had attended. We then divided the sample into two studies for analysis on the basis of type of control group and length of time the child had spent in the sex ring. Nonabuse was determined by asking the control subjects if they had ever been pressured or forced to have sex. Oversampling was done to ensure adequate numbers of control subjects; seven control subjects were dropped because they answered yes to the question about sexual abuse (one sibling and six schoolmates).

Study 1 is an 8-year follow-up interview of 17 white adolescents who had been sexually exploited in sex rings for less than 1 year (12). Six were boys and 11 were girls. Their ages ranged from 14 to 20 years (mean=17.4 years) at follow-up. All had lower- or working-class backgrounds as indicated by both their mother's and their father's education. (The educational level of all of the parents was the high school level or below; 11 (65%) of the mothers and 14 (82%) of the fathers had not completed high school.) Family economic status indicated that 15 (88%) of the family incomes were "approximately the same as all other family incomes in the neighborhood." The 17 adolescents were matched in gender and closest age to 17 siblings who had not been abused. The control group in study 1 constituted a within-family control.

Study 2 is a 6-year follow-up interview of 17 white sexually abused boys who had been exploited in a sex ring for more than 1 year (13). Their ages ranged from 17 to 21 (mean=19.8 years) at follow-up. All of their parents had lower- or working-class backgrounds as indicated by their mother's and their father's education. (The educational level of all the fathers was less than the high school level.) Their family economic status was judged to be "lower than most in the neighborhood" and welfare was the major source of income. These 17 adolescents were matched in age, race, gender, and family structure with 17 schoolmates who had not been sexually abused.

In both study 1 and study 2, the sexually abused youngsters were compared with non-sexually-abused control subjects in family history, family structure, and previous trauma. We also examined the nature of the sex ring abuse and compared the abused and non-abused subjects in study 1 and study 2 on different outcome behaviors, including symptom expression, substance use, sexual behavior, peer and family interaction, and delinquent or criminal activities.

Data Collection

The 34 youngsters who had been abused took part in a semistructured interview that consisted of three sections. The first section covered the background of their sexual abuse and consisted of descriptions of the sexual contact, the background of the offenders, the sex rings, and the prostitution; reports of abuse; and a summary of what happened in the criminal justice

system. The second section was the family interview and covered the subject's family structure, the sociode-mographic profile of the family, new incidents of sexual abuse, and the effects of disclosure. The third section was the child interview and included the Piers-Harris Children's Self-Concept Scale (14), the Moos Family Environment Scale (15), beliefs about sexual abuse and exploitation, a life events scale, the Impact of Event Scale (16), a coping checklist, a behavior checklist, a delinquent behavior checklist, and the subject's sexual behavior status.

The 34 control subjects took part in another semistructured interview that covered any history of sexual abuse and exploitation and included a behavior checklist, a delinquent behavior checklist, the subject's sexual behavior status, a life events scale, the Piers-Harris scale, and the Family Environment Scale. Delinquent or criminal activities for all 64 youngsters were confirmed through school and/or arrest records.

Questions related to the disclosure of the abuse were examined by asking whether the child felt pressured, threatened, rejected, punished, or blamed by his or her parents for telling about the abuse.

The abused youngsters' perceptions of their family environments after disclosure of the abuse were assessed by using subscales of the Family Environment Scale that represent the domain of family relationships (15). Twenty-seven true/false self-report items from this scale made up three subscales—cohesion, expressiveness, and conflict. Family Environment Scale subscales possess adequate internal consistency and test-retest reliability and have been used in a variety of studies of both healthy and distressed families (15, 17). Questions on the cohesion subscale addressed the extent to which the family environment was shared and mutually supportive and included the items "We really get along well with each other," "There is a feeling of togetherness in our family," and "Family members really help and support one another."

Data Analysis

Frequency tabulations were made on the age of the abused child, family history and structure, previous trauma, and nature of abuse. Cross-tabular analysis was used to assess outcome behaviors of the sexually abused subjects and their controls within study 1 and study 2 and between study 1 and study 2. The statistical significance of relationships was assessed by using Fisher's exact test for small samples. The Bonferroni correction was used to adjust for type I error inflation. Because study 1 included both boys and girls, sex was controlled to ensure that the results were not affected by sex.

Conceptual Framework

The study's conceptual framework provides a guide for the interpretation of data. The model uses three critical phases in traumatic experiences and a cogni-

tive-behavioral structure of information processing of traumatic events (18-20). Phase 1, the period before the traumatic event, included the child's age and personality development, the history and structure of the family, and the child's history of previous trauma. Phase 2, the period of activities relevant to the abuse and exploitation of the child, included data on the offender's behavior (e.g., operation and organization of the sex ring), the child's coping and defensive responses, and the "trauma learning," or the stored information regarding the traumatic event. This information is accessed through sensations, perceptions, and cognitions. When the abuse remains undisclosed, encapsulation of the trauma occurs, and the child's life at school and in peer activities parallels the ongoing abuse. Trauma replay is critical here; reenactment, repetition, and displacement of the sexual activity can occur. Phase 3, the period of disclosure of the ring's activities, includes the social responses of others to finding out about the abuse and the behavior of the child following such disclosure.

RESULTS

The small sample sizes, sex distribution, selectivity of the sample (sexually abused children officially recognized through criminal court proceedings), the fact that the abuse was carried out by adults who were not family members, and the complexity of the lives of these young people make it impossible to suggest any causal link between childhood sexual abuse and social deviance. These data and the results of the interviews do, however, suggest trends for hypotheses to be tested on larger, random samples.

Although study 1 had a fairly equal distribution of two-parent (N=9) and one-parent (N=8) families, in study 2 the majority (N=12) were one-parent families; only five were two-parent families. In study 2, more fathers had histories of alcohol abuse (N=10, 59%), had criminal histories (N=4, 24%), and had been absent for more than 10 months before the subject was 12 years old (N=12, 71%) than in study 1 (N=5, 29%; N=1, 6%; N=6, 35%, respectively). Also, more of the subjects had been physically abused as children in study 2 than in study 1: 14 (82%) versus three (18%). Thus, more of the youngsters in study 2 than in study 1 had a parent role model for absence, aggression, and alcoholism and a history of childhood physical abuse before sexual victimization.

In study 1, the perpetrators had access to the children through the neighborhood, the family, or work. Children were in the ring for less than 1 year, reported minimal involvement in pornography, and did not tell anyone about the ring, fearing that they would not be believed. Also, each perpetrator conducted the sexual acts on a one-to-one basis without witnesses, peer sexual activity was not encouraged, alcohol and drugs were available but not imposed, and, although sex may have been discussed, the talk focused on liking and

preferences for one another. At disclosure of the sexual abuse, the children in study 1 were under age 12; they continued to attend school.

In study 2, the offender was a volunteer athletic coach, but he had control over the boys by his access to confidential files and family information. The boys were in the sex ring for more than 1 year; older siblings were encouraged to recruit younger siblings; using alcohol and drugs and participating in pornography were expected behaviors; ritualized homosexuality with sadistic features characterized the activities; and threats and acts of violence occurred between older and younger boys. At disclosure of the abuse, the victims were teen-agers; the majority dropped out of school.

In both study 1 and study 2, the symptoms of the abused youngsters after disclosure of the abuse were suggestive of chronic posttraumatic stress and pointed to high levels of anxiety, fears, and intrusive thinking, especially in comparison with the levels of the control groups. There were significant differences (p < .01)between sexually abused young people and their nonabused siblings in study 1. These included a history of stomachaches, fear of being alone, sleep problems, excess energy, nervousness, inhibition of feelings, blanking out, and confused feelings about sex. In study 2, the one significant difference between the sexually abused youngsters and their controls was the presence of flashbacks.

In comparing use of alcohol and drugs in study 1 and study 2, we found a tendency for the abused youth in study 1 to experiment with drugs more than their controls-marijuana, for example. However, alcohol was the only substance the abused youngsters used significantly more often than the nonabused youngsters in study 1 (p=.05), and it was used with parental consent. The abused youngsters in study 2 used amphetamines, heroin, and psychedelics significantly more than did their controls (p < .001).

There were no significant differences in sexual interests and behavior between the sexually abused youngsters and their controls in study 1; however, in study 2 the abused young people differed from their controls on two sexual behaviors—compulsive masturbation

(p=.03) and prostitution (p=.03).

The abused youngsters in study 1 reported difficulty in relationships with friends of the opposite sex (p=.007), and the abused youngsters in study 2 reported engaging in physical fights with friends (p= .01). In behavior with parents, the abused youngsters in study 1 did not differ significantly from their controls on any of the five indicators of parental interaction (physical fights, verbal fights, disobeying rules, wanting extra parental attention, or withdrawal from or avoidance of parents); however, the abused youngsters in study 2 reported physical fights with their parents (p < .01).

There were significant differences (p<.001) between the abused youngsters in study 1 and study 2 in their families' reactions to disclosure of the abuse. The

TABLE 1. Delinquent or Criminal Activity of 17 Young People Who Had Experienced Prolonged Sexual Abuse and 13 Schoolmates Who Had Not Been Abused^a

		exually Abused Cont Subjects Subje		ntrol ojects	v ²	
Variable	N	%	N	%	(df=1)	p ^b
Had trouble with the law	17	100	1	8	12.12	.001
Arrested	17	100	2	15	9.35	.005
Participated in acts of violence	14	82	4	31	3.88	.07
Ran away from home	13	76	1	8	9.37	.003
Took things or money from family	15	88	6	46	4.19	.05
Stole less than \$20	17	100	5	38	5.59	.02
Stole more than \$20	15	88	3	23	9.21	.004
Participated in breaking and entering	15	88	1	8	14.50	.0001
Purposely destroyed property	17	100	4	31	10.54	.002
Physically assaulted someone without provocation	13	76	0	0	14.83	.0001
Used a weapon	13	76	0	0	14.83	.0001

^aValidation of delinquent or criminal activity through official records was possible for 13 of the 17 control subjects. The four control subjects who did not report any of the listed activities are not included in this table.

^bCorrection for the Bonferroni type 1 inflation error indicated statistical significance at p<.004.

sexually abused youngsters in study 2 were much more likely to feel pressured, threatened, or rejected for telling about the abuse; to feel punished by their parents for the abuse; and to feel parental blame. Thus, it is not surprising that study 2 victims were more likely to feel sorry that they disclosed the abuse. For example, Jed, age 14, was the oldest boy in a sex ring at the time of disclosure. His father, visibly upset at the disclosure, blurted out, "You pervert; you must have liked it to stay in the troop." Jed's behavior deteriorated; he isolated himself from his friends and dropped out of school. His sexual activities escalated, as did his use of drugs and alcohol. He had numerous encounters with police, and a high-speed car chase culminated in a serious accident. His parents reported him as a runaway in 1982.

Tests of mean difference for each of three family environment dimensions (cohesion, expressiveness, and conflict) indicated no significant differences between the sexually abused youngsters and their controls in study 1. A difference was found, however, in study 2 between the sexually abused youngsters and their controls on the dimension of conflict within family relationships. The sexually abused subjects were less likely than were their controls to have family members who were supportive, and they perceived their families as openly expressing anger, aggression, and conflict.

There were such striking differences between the abused and nonabused subjects in study 2 in the area of delinquent and criminal behaviors that the Bonferroni correction was applied to ensure noninflation of a level of significance (p<.004). There were no differences in study 1 between the abused youngsters and their nonabused controls in delinquent and criminal activities. Abused youngsters in study 2, on the other hand, were significantly more aggressive, unresponsive to authority, and resistive to societal mandates for personal control than nonabused control subjects. They were more likely than their controls to have

trouble with the law, run away from home, steal from the family, break and enter homes, purposely destroy property, engage in physical assault without provocation, and use a weapon (table 1). For example, the numbers of abused young people arrested at least once for crimes that resulted in convictions and jail or prison before age 18 were as follow: car theft, 15; breaking and entering, 15; destruction of property, 14; assault and battery, 11; carrying a weapon, six; assault and battery with a dangerous weapon, four; armed robbery, three; statutory rape, one; rape, sodomy, and false imprisonment, one; attempted murder, one; and second-degree murder, one.

DISCUSSION

The present study identifies trauma-related variables and intervening variables that suggest a descriptive link between childhood sexual abuse and the development of socially deviant behaviors in young people. It also extends our understanding of children's informational processing of traumatic events. The findings suggest that delinquent and criminal behaviors are associated with the previous trauma of childhood physical abuse in boys who were in adult and peer sex and pornography rings for an extended time and who, on disclosure, were blamed for their sexual participation, were socially excluded, and dropped out of school. Following disclosure, these boys managed their flashbacks through the extension of drug abuse, and the ring-specific behaviors of compulsive masturbation, prostitution, and aggressive acts continued and escalated. In contrast, youngsters who were molested for a limited time in a sex ring that was not organized around peer exploitation came from more stable and nonblaming families and did not display delinquent or criminal behaviors significantly more than their nonsexually-abused siblings. After disclosure, they continued to attend school with their peers, and they reported general posttrauma symptoms and traumaspecific symptoms of confusion regarding sexual feelings and gender role.

We will discuss here the dimensions of three critical phases in this 6- and 8-year prospective study within a model of traumatic event processing. The first critical phase is the phase before the trauma. A family history for instability and violence, documented here and by other researchers (21–24), suggests that a parental role model for criminality, substance abuse, and emotional isolation who is also physically abusive in the family may predispose an abused child to feelings of anger and resentment. These feelings, in turn, foster retaliative feelings and fantasy (25), an identification with group aggression (23), and drug use (26-29). The cumulative trauma of previous physical abuse adds to the psychological burden for the child and, as Green (22) emphasized, adversely influences ego defenses, character formation, mastery, and cognitive development.

In the trauma phase, the abused youngsters in study 2 had had an extended period of time to repeatedly experience, witness, and practice the adult-initiated sex, sadism, and pornography. We suggest that the trauma replay through reenactment and repetition of sexual acts on younger and weaker children provided the child a sense of mastery and superiority in not being concerned about the fear, pain, shame, or degradation of another. These children split with their empathic capacities for that part of themselves which was terrified, humiliated, and victimized.

During trauma encapsulation, several levels of defense begin with dissociation. This accommodates alterations in physiological states ranging from numbness, anxiety, and tension to accelerated affects (30, 31). A further level of cognitive and behavioral organization occurs through a splitting of two internalized schemata—an externalizing pattern of aggressive acting out and an internalizing pattern of avoidance and withdrawal (32, 33). Both schemata are present because the child had to either submit, inhibit, or dissociate that part of the self which could be assertive or resist. The combined trauma learning and encapsulation increase the likelihood that the victim will adapt to the overall aggressive victimizing role.

In the third critical phase, the posttraumatic phase, disclosure brings to the surface the child's memories of the traumatic experience and its attendant affects. It is not surprising that use of alcohol and drugs, introduced by the abuser to assist the child in controlling tension, symptoms, and avoidant thoughts associated with the victimizing experience, is extended during this phase as stress develops concerning the response of family, peers, and outsiders. The abused youngsters in study 1 used alcohol with parental permission; however, the selection of drugs by the abused youngsters in study 2 is quite revealing. That these young people reported flashbacks emphasized the visual component of the ring activities (e.g., witnessing and pornography). Although the relationship to imagery and aggres-

sive behavioral responses is not yet clear, there is evidence that some sex offenders are highly visual and employ sexual fantasies in their crimes (26, 34). The selection by abused youngsters in study 2 of psychedelic drugs and amphetamines, known to be stimulants and activators of imagery, and heroin, known as an antithesis for rage and aggression, suggests the need by some of these young people to maintain visual stimulation and to regulate their sensory state for an optimum level of sexually aggressive arousal after disclosure. Our impressions, and as suggested by Khantzian (26) and others (27–29), are that drug choice is not a random phenomenon but, rather, self-medicating for either subduing or heightening tension.

High-quality support and acceptance by fam ly and peers have the potential to mediate a child's anxiety regarding disclosure of sexual abuse. In families that are supportive and nonblaming but unable to confront and discuss directly the abusive situation, the pattern of avoidant behaviors may predispose the child to covert predatory acts within the family or neighborhood. For example, Bill described walking into the room with the offender, pretending he was a "wind-up toy" as he complied with the sexual demands. While Bill was in high school, the activities of the sex ring were disclosed. Bill's mother was terminally ill at the time, and Bill had not disclosed the abuse because he was told by his abuser that it would kill his mother if she found out. Bill sought out the school nurse in an effort to deal with his grief but refused to talk about the abuse. Bill's mother died after the abuse was revealed. Bill graduated from high school, enlisted in the military, and appeared to be functioning adequately. At age 19, however, while he was on leave from a tour in Japan, Bill's father reported that Bill was exhibiting himself at home and that he had attempted to sexually abuse his 12-year-old sister. We do not know what happened in Japan, but Bill's sexual aggression toward his sister suggests two interpretations. 1) Bill's fantasies were activated while he was in Japan because the sexual ritual of the abuse ir volved the offender's telling stories of his war experiences in that country. On return home, Bill acted out these fantasies on his sister. 2) Bill's return home brought to the surface a delayed posttrauma stress response in which he repeated his own victimization at age 12.

Overt aggressive patterns emerge in families that are disorganized, nonsupportive, and blaming in artitude. For example, 18-year-old Joe had been in consenting sexual relationships with girls since the disclosure of the ring's activities and had continued heavy drug use. When one of his former girlfriends refused his sexual advances and tried to terminate the relationship he hit her repeatedly on the head with a hammer and raped her, which resulted in her emergency hospital admission to the intensive care unit. We speculate that this young man felt a heightened narcissistic entitlement; during the ring activity he had been a favored boy victim. His girlfriend's rejection and refusal of sex provoked rage and the murderous act.

CONCLUSIONS

When prolonged sexual abuse is compounded as in the witnessing and perpetrating of sexual dominance in a ring, the nature of the experience can have a primary influence on the young person's response pattern. Major cognitive operations necessary to process and manage distress develop. Basic to these is dissociation, which in turn leads to a sealing of the event and the splitting of psychological and sensory experiences. We theorize, for those abused youth who become abusers, that through dissociation there is a massive blocking at a sensory level (e.g., their need to override numbness by seeking extreme states of excitement through drugs), at a perceptual level (e.g., a minimal cue response for interpersonal feelings of tenderness, attachment, and caring paired with a heightened predilection for deviant stimuli), and at a cognitive level (e.g., the condoning of sexual violence by adults and negation of social values). The trauma learning from the sex ring activities interacts with past cumulative childhood trauma and negative social responses to disclosure. The youth's denial of his position of vulnerability and helplessness as a victim enhances identification with aggression. This reformulation of the actual trauma experience creates the link from abused to abuser.

The therapeutic implications of this study are that efforts need to be aimed at 1) identifying and interrupting sexual abuse, 2) understanding the organization of the victim's defensive structure and its relationship to the abuse, 3) modifying the psychological defenses so that the victim can tolerate discussing the abuse, 4) unlinking the trauma at sensory, perceptual, and cognitive levels from dysfunctional behaviors, 5) processing the integrated trauma to past memory, and 6) rebuilding coping behaviors that provide for a positive interaction with the future.

REFERENCES

- 1. Freud S: The etiology of hysteria (1896), in Collected Papers, vol 1. Edited by Jones E; translated by Riviere J. New York, Basic Books, 1959
- 2. Gleuck BC: Early sexual experiences in schizophrenia, in Advances in Sex Research. Edited by Biegel H. New York, Harper & Row, 1963
- 3. Carmen E(H), Rieker PP, Mills T: Victims of violence and sychiatric illness. Am J Psychiatry 1984; 141:378-383
- 4. Herman J, Russell D, Trocki K: Long-term effects of incestuous abuse in childhood. Am J Psychiatry 1986; 143:1293-1296
- 5. Briere J, Runtz M: Suicidal thoughts and behaviors in former sexual abuse victims. Can J Behavioral Sciences 1986; 18:413-
- 6. Groth AN: Sexual trauma in the life histories of sex offenders. Victimology 1979; 4:6–10
- 7. Seghorn TK, Boucher RJ, Prentky RA: Childhood sexual abuse in the lives of sexually aggressive offenders. J Am Acad Child Psychiatry (in press)
- 8. Fehrenbach PA, Smith W, Monastersky C, et al: Adolescent

- sexual offenders: offender and offense characteristics. Am J Orthopsychiatry 1986; 56:225-233
- 9. James J, Meyerding J: Early sexual experience and prostitution. Am J Psychiatry 1977; 134:1381–1385
- 10. Silbert MH, Pines AM: Sexual child abuse as an antecedent to prostitution. Child Abuse Negl 1981; 5:407-411
- 11. Rieker PP, Carmen E(H): The victim-to-patient process: the disconfirmation and transformation of abuse. Am J Orthopsychiatry 1986; 56:360-370
- 12. Burgess AW, Groth AN, McCausland MP: Child sex initiation
- rings. Am J Orthopsychiatry 1981; 51:110-119 13. Burgess AW, Hartman CR, McCausland MP, et al: Response patterns in children and adolescents exploited through sex rings and pornography. Am J Psychiatry 1984; 141:656-662
- 14. Piers E, Harris D: The Piers-Harris Children's Self-Concept Scale. Nashville, Counselor Recordings and Tests, 1969
- 15. Moos R, Moos B: Family Environment Scale Manual. Palo Alto, Calif, Consulting Psychologists Press, 1981
- 16. Horowitz MJ, Wilner N, Alvarez W: Impact of Event Scale: a measure of subjective stress. Psychosom Med 1979; 41:209-
- 17. Moos R, Moos B: Adaptation and quality of life in work and family settings. J Community Psychiatry 1983; 11:158-170
- 18. Hartman CR, Burgess AW: Child sexual abuse: generic roots of the victim experience. J Psychotherapy & the Family 1986; 2:
- 19. Horowitz MJ: Stress Response Syndromes, 2nd ed. New York, Jason Aronson, 1986
- 20. Child molestation: assessing impact in multiple victims. Archives of Psychiatric Nursing 1987; 1(1):33-39
- 21. Straus M, Gelles R, Steinmetz S: Behind Closed Doors: Violence in the American Family. New York, Anchor Press/Doubleday, 1980
- 22. Green AH: Children traumatized by physical abuse, in Post-Traumatic Stress Disorder in Children. Edited by Eth S, Pynoos RS. Washington, DC, American Psychiatric Press, 1985
- 23. Hartstone E, Hansen KV: The violent juvenile offender: an empirical portrait, in Violent Juvenile Offenders: An Anthology. Edited by Mathias RA, DeMuro P, Allinson RS. San Francisco, National Council on Crime and Delinquency, 1984
- 24. Garbarino J, Gilliam G: Understanding Abusive Families. Lexington, Mass, Lexington Books, 1980
- Burgess AW, Hartman CR, Ressler RK, et al: Sexual homicide: a motivational model. J Interpersonal Violence 1986; 1:251–
- 26. Khantzian EJ. The self-medication hypothesis of addictive disorders: focus on heroin and cocaine dependence. Am J Psychiatry 1985; 142:1259-1264
- 27. Wieder H, Kaplan EH: Drug use in adolescents: psychodynamic meaning and pharmacogenic effect. Psychoanal Study Child 1969; 24:399-431
- 28. Milkman H, Frosch WA: On the preferential abuse of heroin and amphetamine. J Nerv Ment Dis 1973; 156:242-248
- 29. Krystal H, Raskin HA: Drug Dependence: Aspects of Ego Functions. Detroit, Wayne State University Press, 1970
- 30. Stoller R: Splitting: A Case of Female Masculinity. New York, Delta Books, 1973
- 31. Hartman CR, Burgess AW: Child to child sexual abuse. J
- Interpersonal Violence (in press)
 32. Achenbach TM, Edelbrock CS: The classification of child
- psychopathology: a review and analysis of empirical effects. Psychol Bull 1978; 85:1275-1301
- 33. Ross AO: Psychological Disorders of Children: A Behavioral Approach to Theory, Research and Therapy. New York, McGraw-Hill, 1974
- 34. Abel GG, Rouleau JL, Cunningham-Rathner J: Sexually aggressive behavior, in Modern Legal Psychiatry and Psychology. Edited by Curran W, McGarry AL, Shah SA. Philadelphia, FA Davis, 1985

Conceptual and Methodological Issues in the Comparison of Inpatient Psychiatric Facilities

Nancy A. Goodban, Ph.D., Paul B. Lieberman, M.D., Michael A. Levine, M.A., Boris M. Astrachan, M.D., and Vincent Cocilovo, M.D.

The authors compared the length of stay of acute admission patients at a mental health center and a nearby state hospital. The two facilities had significantly different length of stay distributions; the mean was not an adequate index to describe these patterns. Despite careful matching, patients at the state hospital were more disabled. Different patient characteristics were associated with length of stay at the two facilities, and these were also characteristics on which the patient populations differed at admission. The authors conclude that comparisons of hospitals, for example, on mean or median length of stay can be misleading unless the different functions, policies, and constraints of the facilities are taken into account.

(Am J Psychiatry 1987; 144:1437-1443)

Research has approached the study of length of stay in psychiatric hospitals from two different perspectives. One looks at length of stay as a predictor of outcome. In general, these studies have found that more hospital days are no more beneficial than shorter lengths of stay (1–8). The other approach, represented in this paper, concentrates on predicting length of stay and leaves aside the question of whether there is an optimum length of stay representing the most appropriate care (9–12). This approach has become more common as concern has increased about the cost of inpatient psychiatric care.

Although the research literature presents a mixed picture regarding whether the full constellation of necessary outpatient services is less costly than hospital-based care for disabled, seriously disturbed patients, it is generally thought that hospitalization

should be limited to those who absolutely need it. Therefore, length of stay is rigorously controlled and attempts are made to provide care at other levels of service as appropriate. Within this framework the question arises: "What different types of patients are there, and what is the normative length of stay for each type?" Although practitioners resist equating what is normative with what is optimal, programs for cost containment such as prospective payment systems based on diagnosis-related groups (DRGs) have focused increased attention on efforts to establish norms for length of stay.

Studies predicting length of stay tend to look at the characteristics of either patients or the hospital system. There is evidence for the importance of both. Patient characteristics, including sociodemographic (employment history, insurance status, age, sex, race, and marital status) and clinical (diagnosis, axis IV and V ratings, and psychiatric history) variables have been found to be associated with length of stay in a number of studies (9-17). Relevant hospital and system characteristics include staffing patterns, availability of aftercare, treatment goals, referral patterns, and ward milieu (2, 18, 19). Recent research has examined the effect of benefit structure (20), hospital ownership, and type of hospital (21, 22). In addition, refinements of the DRG system have been suggested (23-25) in order to predict length of stay more accurately.

Thus far, however, little consensus exists about the factors that account for length of stay. Studies that have identified predictive factors do not agree on what these factors are. In any case, length of stay analyses tend to use mean length of stay as an index of length of stay and to predict length of stay by using parametric statistics such as linear multiple regression (10–12, 26)

The current study explored length of stay patterns at two public sector psychiatric facilities that serve the same geographic area in order to learn whether length of stay for acute care populations from a specified geographic area differed at the two facilities and, if so, what factors might account for differences between the two facilities. In the process of the analysis, several methodological problems were uncovered that may account in part for the difficulty in understanding and predicting length of stay in psychiatry.

Received Oct. 8, 1985; revised Feb. 2, 1987; accepted April 2, 1987. From the Connecticut Mental Health Center, New Haven; Connecticut Valley Hospital, Middletown; and the Department of Psychiatry, Yale University, New Haven. Address reprint requests to Dr. Lieberman, Department of Psychiatry, Dartmouth Medical School, Hanover, NH 03756.

Supported in part by NIMH training grant MH-15783. The authors thank Phil Leaf, Ph.D., Jim Wells, Ph.D., Kenji Hakuta, Ph.D., and Dave Kenny, Ph.D., for suggestions and advice. Copyright © 1987 American Psychiatric Association.

METHOD

The facilities studied were a state hospital and a mental health center in south central Connecticut. They are both public sector institutions, part of the state department of mental health system, and subject to the same fiscal constraints and payment policies.

The mental health center, administered jointly by a university department of psychiatry and the department of mental health, is primarily an outpatient facility with a small acute care inpatient unit consisting of 32 beds. It is located in the center of the largest city in its 13-town catchment area, which has a population of 425,000. Mental health center patients who need long-term hospitalization are transferred to the state hospital, which has facilities for the provision of both short- and long-term care.

The state hospital is a large regional facility and is mostly inpatient. It is located 30 miles to the north and serves a broader geographic area. For the purposes of this study, we used only subjects from the mental health center catchment area who were admitted to the acute care unit.

This pair of hospitals was selected for comparison for several reasons. First, both facilities share the same formal criteria for admission to their acute inpatient treatment units: individuals who are admitted must be public patients with severe psychiatric disorders and must live in the geographic area of the facility. Second, the pressures of deinstitutionalization have led to a gradual phasing down of long-term care at the state hospital and an attempt at the convergence of its functions with those of the mental health center so that programs for acutely ill inpatients are now similar. Last, the two facilities are part of the same system of care. Ninety percent of the patients admitted to the state hospital from the mental health center catchment area have a history of inpatient or outpatient treatment at the mental health center. At the same time, the majority of patients discharged from the state hospital are referred to the mental health center for outpatient treatment. The two facilities share access to the same range of community and aftercare programs.

The study population included all patients admitted for acute psychiatric care to either facility from the mental health center catchment area during the 6-month period July to December 1983. The data were obtained from the computer database maintained by the department of mental health. Derivation of the study sample is shown in table 1.

Patients admitted to either facility for specialized detoxification (the bulk of the patients admitted to the state hospital) or geriatric treatment were excluded from the study. Patients who were committed to the state hospital by the courts through civil commitment proceedings, insanity acquittals, and so forth were also excluded, since patients with these legal statuses were not eligible for admission to the mental health center. As might be expected from the structure of the two facilities, the study population made up a much

TABLE 1. Derivation of Sample of Acutely III Patients Admitted to a State Hospital or Mental Health Center, July 1—Dec. 31, 1983

	Sta Hosp Patie	oital	He: Cer	ntal alth iter ents_
Group	N	%	N	%
Total admissions	1,705	100	280	100
Excluded admissions	•			
Drug and alcohol admissions	1,105	65	33	12
Geriatric admissions	33	2	8	3
Nonresidents of area	346	20	34	12
Court-mandated admissions	52	3	0	0
Repeat admissions ^a	36	2	18	6
Study sample	133	8	187	67

^aPatients admitted to one of the two facilities more than once during the study period; only the first admission episode was used for this study.

smaller proportion of total admissions at the state hospital than at the mental health center.

Patients who were transferred were categorized according to the facility of admission. Patients who were transferred from the mental health center to the state hospital were counted as mental health center patients only (there were no transfers in the other direction during the study period). Finally, repeat episodes for any patient during the period were excluded. These criteria yielded 133 patients at the state hospital and 187 at the mental health center.

RESULTS

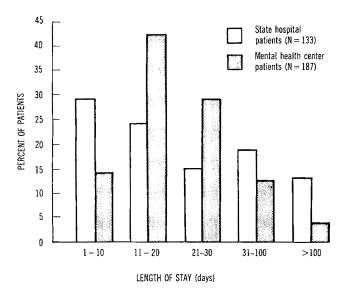
Differences in Length of Stay

The first question was whether length of stay differed between the two facilities. We were interested in the total hospitalization for each illness episode, so if a patient was transferred from the mental health center to the state hospital, the length of stay assigned for the mental health center included the accumulated days at both facilities. Comparable state hospital patients needing long-term care were transferred to other units within the hospital.

The median lengths of stay at the two facilities were very similar—20 days at the mental health center and 17 days at the state hospital. On the other hand, the means \pm SDs were very different—26.1 \pm 34.2 days at the mental health center and 42.6 \pm 61.2 days at the state hospital, indicating greater positive skew for the state hospital. The range was much greater at the mental health center (1–378 days) than at the state hospital (1–357 days).

It is clear from figure 1 that not only were the mean lengths of stay different, but so were the distributions. (Because of the long tail on the state hospital distribution, those with lengths of stay greater than 100 days were grouped at more than 100 days for the purposes of the graph.) The Kolmogorov-Smirnov two-sample

FIGURE 1. Length of Stay of Acutely III Patients Admitted to a State Hospital or Mental Health Center, July 1–Dec. 31, 1983



test of the difference in distributions (27) yielded a D of .20 (p<.01), indicating that these were significantly different distributions. Forty-two percent of the patients admitted to the mental health center were discharged between days 11 and 20; the 3% who stayed for more than 100 days represented transfers to the state hospital. Of the patients admitted to the state hospital, almost 30% were discharged in 10 days or less, while 13% stayed for more than 100 days; the latter group represented intrahospital transfers from the acute care unit to a longer-term unit. It is not simply that patients admitted to the state hospital stayed longer but that the facilities had different distributions.

Differences in Patient Populations

Although comparable patient groups were selected, any differences in the populations might well be related to different length of stay patterns. In fact, these populations differed in some important respects. It can be seen from table 2 that although the patients did not differ in race, age, or education, they differed significantly on sex and marital status. There was almost a 60:40 ratio of men to women at the state hospital and a 45:55 ratio of men to women at the mental health center. Most of the married patients had been admitted to the mental health center, while the state hospital had a disproportionate number of single people.

The patient populations also differed clinically. As can be seen in table 2, there were significantly more schizophrenic patients at the state hospital—36% compared to 22%. (Diagnosis was based on the facility's medical records; we did not examine its validity.) The facilities had comparable proportions of patients with other psychoses (primarily paranoid disorders), affective disorders, adjustment disorders, and substance abuse disorders. The "other" category at the

mental health center included patients with personality disorders and conditions not attributable to mental disorders (admissions with an important medical component), as well as panic, conduct, impulse, developmental, and eating disorders.

Twenty-five percent of the state hospital patients, compared to 13% of the mental health center patients, had been discharged from a psychiatric hospital within 6 months before the index episode. State hospital patients were more likely than mental health center patients to be on Medicare, which in this sample was an indication of disability. (In order to qualify for Medicare status, an individual must either be over age 65 or have received Social Security disability payments for 24 months. Because we excluded all patients over age 65, patients on Medicare in this study had qualified for and received Social Security disability payments.)

It is clear that not only were the length of stay patterns different at the two facilities but, to some extent, so were the patients. In particular, patients at the state hospital were identified as more disabled on many clinical indicators.

Predicting Length of Stay

The next question was whether patient characteristics accounted for the different lengths of stay at the two hospitals. In a study of this sort, the typical approach would be to use multiple linear regression to see whether facility had an independent effect on length of stay when relevant patient characteristics such as age, sex, disability, psychiatric history, and diagnosis were controlled. However, because of the significant differences in the distributions, multiple regression was inappropriate for this sample. The significant difference in the variance of length of stay between the two facilities (F=1.8, df=132, 186, p<.01) violates the assumption of homogeneity of variance across subgroups and would invalidate the regression results.

Therefore, patient characteristics that affected length of stay within each facility were examined separately to see whether there were any common factors that could be isolated. To normalize the curves as completely as possible, log transformations on the length of stay scores were used. Although the log transformation did not completely normalize the length of stay distributions, particularly at the state hospital, log length of stay approached normality more closely than alternative transformations (28).

Examining each demographic and clinical variable separately (table 2), we found that there were no factors predictive of length of stay in common to both facilities. At the mental health center, the only patient characteristic related to length of stay was diagnosis. A psychotic diagnosis predicted that the patient would stay longer (t=4.3, df=185, p=.0001). Several actors had independent associations with log length of stay at the state hospital. Patients on Medicare stayed longer (t=2.25, df=131, p<.03), as did patients who had

TABLE 2. Sociodemographic and Clinical Characteristics of Acutely III Patients Admitted to a State Hospital or Mental Health Center, July 1—Dec. 31, 1983

	State F Pati (N=			Health Patients 187)		df	
Characteristic	N	% ^a	N	% ^a	X ²		p
Sex							
Male	78	59	84	45	5.32	1	.02
Female	55	41	103	55			
Race							
White	89	67	128	68	0.70	2	.70
Black	33	25	41	22			
Other	10	7	18	9			
No data	1		0				
Education (years)	_		-				
<8	9	9	18	10	5.66	2	<.06
8–12	74	72	107	59	0.00	-	
>12	19	19	56	31			
No data	31	.,	6	0.2			
Age (years)	0.2		v				
18-25	39	29	52	28	3.48	4	.48
26–35	58	44	67	36	5.10	•	. 10
36-45	19	14	38	20			
46–55	9	7	17	9			
5664	8	6	13	7			
Marital status	Ü	v	13	,			
Married	5	4	27	14	10.06	2	<.01
Divorced, separated, or widowed	39	30	57	31	10.00	2	٧.01
Never married	85	66	102	55			
No data	4	00	1	33			
Primary diagnosis	•		1				
Schizophrenia	48	36	40	22	13.84	5	<.02
Other psychosis	16	12	26	14	13.04	J	₹.02
Affective disorder	29	22	39	22			
Adjustment disorder	16	12	28	16			
Substance abuse ^b	18	14	21	12			
Other	6	4	26	14			
No data	0	7	26 7	14			
Inpatient episodes in last 6 months	U		/				
None	100	75	162	87	6.1	1	<.02
	33	25	25	13	0.1	ī	<.02
One or more	33	۷.)	23	13			
Medicare status/disability	20	22	27	1.4	2.4	1	12
Medicare No Medicare	29 104	22 78	27 160	14 86	2.4	1	.12
No iviedicare	104	/8	160	86			

^aPercents are based on number of patients for whom data were available.

been hospitalized within 6 months before admission (t=2.51, df=131, p<.02). In addition, older patients tended to stay longer (r=.07, df=132, p<.002).

Separate regression equations were calculated for each facility in order to determine whether a factor that by itself predicted length of stay (age, diagnosis, Medicare status, and recent hospitalization) would remain a significant predictor when the simultaneous effects of other factors were statistically controlled.

At the mental health center, the utility of a psychotic diagnosis in predicting length of stay held up in linear multiple regression of the log length of stay on sex, age, diagnosis, and Medicare status. Psychosis was the only statistically significant predictor. However, the total variance in length of stay explained by these four factors was only 10% ($R^2=.10$, F=6.5, df=3, 183, p=.0005).

When diagnosis, Medicare status, age, and recent

hospitalization were entered simultaneously into a multiple regression equation that used only state hospital patients, Medicare status and recent hospitalization remained significant predictors. However, the entire set of four predictors accounted for only 9% of the variance in length of stay (R²=.09, F=4.2, df=3, 129, p=.008).

DISCUSSION

Recent proposals for containing the cost of psychiatric hospitalization have focused considerable attention on the length of hospital stay (29, 30). Thus far, however, within psychiatry, attempts to discover homogeneous patient groups with similar lengths of stay (21, 31, 32) or to find generally applicable clinical and demographic characteristics that predict the duration

^bPatients were not admitted for drug and alcohol problems but were later given this diagnosis.

of hospitalization (9, 10, 20–25) have not been successful. The current report suggests some reasons for the lack of success to date and indicates some of the difficulties that arise when attempts are made to compare facilities on length of stay.

In this study, two public hospitals serving similar patients in the same catchment area were compared with respect to their length of stay and factors that predicted length of stay in each institution. The facilities shared common criteria for admission and comparable treatment programs; they both took only public patients, so insurance status was not a factor; they both had access to the same aftercare and community resources. Nevertheless, the two hospitals differed in several crucial respects.

First, more of the patients admitted to the state hospital were male and unmarried. They were more likely to be diagnosed as schizophrenic and had more recent hospitalizations and greater disability (as indicated by Medicare status). These data suggest that there is a group of patients who—at least during this period of their lives—required a substantial amount of inpatient care and tended to be treated at the state hospital. These data are consistent with studies of the course of major psychiatric disorders, which indicate that hospitalization does not always correlate significantly with such other indicators as symptom severity and work and social functioning (33). They are also consistent with recent conceptualizations of the need for asylum (34) for some patients who are unable to live independently in the community, at least during some period of their lives. In addition, the mental health center admitted patient populations with severe character pathology or medical comorbidity who were more easily managed in the mental health center, which was located in a large medical complex.

While the notion that different hospitals may serve different populations, and thus functions, is accepted clinically, it is not accommodated by systems that attempt to predict length of stay and base reimbursement levels on such factors as diagnosis, comorbidity, global measures of severity, or demographic variables.

The conclusion that hospitals may serve different functions within a system of care is supported by the second finding of this study; different patient characteristics correlated with length of stay at each facility. The data again suggest that patients remain in the hospital for different reasons, depending on facility. At the mental health center only a psychotic diagnosis predicted longer hospitalization, often requiring transfer to the state hospital. At the state hospital age, as well as recent hospitalization and disability, correlated with length of stay. For these patients, it may not be diagnosis, symptom level, or overall disability, but the need for inpatient shelter that necessitates longer length of stay. By contrast, the mental health center tends to admit more acutely ill patients, among whom it appears to be those with protracted psychoses who require more hospitalization. Studies that consider length of stay data across hospitals may fail to recognize such variation, while studies based on a single institution cannot assume general validity.

The findings, first, that these facilities, similar in many ways and with overlapping populations, erved different patients, and, second, that extended length of stay was associated with different factors in each hospital, do not elucidate the processes that actually determine length of stay. The differences between the state hospital and the mental health center cannot be explained by reimbursement methods or availability of aftercare resources. However, the third finding of the study suggests they do seem to be influenced, in part, by different administrative policies with respect to length of stay.

Evidence for the importance of administrative policy in affecting length of stay is derived from the finding that the distribution of length of stay in the two facilities differed significantly. The mental healt reenter defined itself as providing care within a fixe time frame of 3 to 4 weeks. It discharged 58% of all its patients between hospital days 15 and 30, inc uding 35% between days 18 and 21. The state hospital had no such self-definition but was under strong pressure to admit and discharge patients rapidly, as wel as to provide longer-term care for those who required it. At the state hospital, nearly half (43%) of all patients were discharged in under 15 days. Thus, the two length of stay distributions closely paralleled hespital administrative policies and processes, which, in turn, corresponded to the two facilities' divergent functions within the state system. The differences in function endured in spite of attempts to make the facilitie, more comparable by restructuring the state hospital.

The determinants of length of stay for psychiatric facilities may thus be more complex than is usually assumed. The hospital's program, as influenced by the role of the facility within a larger sytem of care, may be a prime and legitimate influence. The effect of · linical and administrative policy on length of stay may not be motivated by financial incentives—as in the present study, where neither hospital had a financial interest in a particular pattern of care, although both we e constrained by limited public funding. The ho pital's function within a community may be shaped by such rarely measured factors as patients' need for asylum; history of reliance on institutions; involvement with (not merely access to) ongoing outpatient treatment; their known response to brief, crisis-oriented care; and their needs for greater or lesser security, structure, or stimulation. These factors are not included in the commonly considered predictors of length of stay and are not captured by demographic, diagnostic, or standard clinical variables.

Moreover, it may not be possible, in a pa ticular setting, to carry out thorough medical assessment, intensive group therapy, and disposition planning with equal efficiency. A hospital that treats most patients acutely by using a crisis intervention or brief treatment model may require fixing an anticipated length of stay for adequate functioning of its program, viile a

facility with a different role or program may not. Hospital policy may thus represent an attempt to optimally fulfill the hospital's role; the powerful effect of clinical and administrative decisions on length of stay would not necessarily indicate inefficiency.

Of course, inefficiency and unnecessary expenditures exist. But their detection requires determination of the actual costs to achieve defined therapeutic goals and consideration of patterns of care provided within the hospital.

In summary, comparing hospitals with respect to length of stay is a considerably more complex task than is often assumed. Hospitals may serve markedly different functions within a system of care. Such differences may not readily be accounted for by the most frequently used predictors of length of stay. Administrative decisions—decisions that consider not only the hospital's function within a larger system, but also its patient and program needs—seem to exert a strong influence on length of stay. Such functional and administrative factors result in quite different patterns of care within different institutions—patterns that are not reflected in simple statistical measures such as mean and median length of stay. Determination of a hospital's efficiency or a fair basis for reimbursement requires consideration of the differences between hospitals and the factors that account for them.

CONCLUSIONS

Problems with comparing hospitals on length of stay are considerably more serious than is realized for the following reasons.

- 1. It is inappropriate to use simple measures of central tendency, such as the mean and median.
- 2. It is difficult to assume or establish comparable patient groups between facilities.
- 3. We cannot assume that the same factors will correlate with length of stay in different hospitals. Aggregating across hospitals and generalizing from one hospital may both be invalid.
- 4. Administrative structures and policies, which may or may not reflect legitimate programmatic and system pressures, may exert an important influence on length of stay.

More valid estimation of a hospital's efficiency would seem to require more specific understanding of patient treatment needs and programmatic goals of the hospital, which in turn may be a function of the role played by the hospital in the system of which it is a part.

REFERENCES

- 1. Caton CLM: Effect of length of inpatient treatment for chronic schizophrenia. Am J Psychiatry 1982; 139:856–861
- 2. Kirshner LA: Length of stay of psychiatric patients: a critical review and discussion. J Nerv Ment Dis 1982; 170:27–33
- 3. Braun P, Kochansky G, Shaprio R, et al: Overview: deinstitutionalization of psychiatric patients, a critical review of out-

- come studies. Am J Psychiatry 1981; 138:736-749
- Herz MI, Endicott J, Gibbon M: Brief hospitalization: two-year follow-up. Arch Gen Psychiatry 1979; 36:701–705
- Hirsch SR, Platt S, Knights A, et al: Shortening hospital stay for psychiatric care: effect on patients and their families. Br Med J 1979; 1:442–446
- Glick ID, Hargreaves WA, Drunes J, et al: Short versus long hospitalization: a prospective controlled study, VII: two-year follow-up results for non-schizophrenics. Arch Gen Psychiatry 1977; 34:314–317
- Swartzburg M, Schwartz A: A five-year study of brief hospitalization. Am J Psychiatry 1976; 133:922–924
 Caffey EM Jr, Galbrecht CR, Klett CJ: Brief hospitalization and
- Caffey EM Jr, Galbrecht CR, Klett CJ: Brief hospitalization and aftercare in the treatment of schizophrenia. Arch Gen Psychiatry 1971; 24:81–86
- Gordon RE, Jardiolin P, Gordon KK: Predicting length of hospital stay of psychiatric patients. Am J Psychiatry 1985; 142: 235–237
- Cyr JJ, Haley GA: Use of demographic and clinical characteristics in predicting hospital stay: a final evaluation. J Consult Clin Psychol 1983; 51:637–640
- 11. Gruber JE: Paths and gates: the sources of recidivism and length of stay on a psychiatric ward. Med Care 1982; 20:1197–1208
- Munley PH, Devone N, Einhorn CM, et al: Demographic and clinical characteristics as predictors of length of hospitalization and readmission. J Clin Psychol 1977; 33:1093–1099
- 13. Altman H, Angle HV, Brown ML, et al: Prediction of length of hospital stay. Compr Psychiatry 1972; 13:471–480
- Steadman HJ, Pasewark RA, Hawkins M, et al: Hospitalization length of insanity acquittees. J Clin Psychol 1983; 39:611–614
- Hibberd T, Trimboli F: Correlates of successful short-term psychiatric hospitalization. Hosp Community Psychiatry 1982; 33:829-833
- Babiker IE: Social and clinical correlates of the "new" long-stay.
 Acta Psychiatr Scand 1980; 61:365–37.5
- Miller GH, Miller B: Length of hospitalization predicted by self assessment of social competence. Can Psychiatr Assoc J 1979; 24:337–339
- 18. Doherty EG: Length of hospitalization on a short-term therapeutic community: a multivariate study by sex across time. Arch Gen Psychiatry 1976; 33:87–92
- Lehman AF, Strauss JS, Ritzler BA, et al: First-admission psychiatric ward milieu: treatment process and outcome. Arch Gen Psychiatry 1982; 39:1293–1298
- Frank RG, Lave JR: A plan for prospective payment for inpatient psychiatric care. Hosp Community Psychiatry 1985; 36:775-776
- 21. Taube CA, Lee ES, Forthofer RN: DRGs in psychiatry: an empirical evaluation. Med Care 1984; 22:597-610
- Taube CA, Thompson JW, Burns BJ, et al: Prospective payment and psychiatric discharges from general hospitals with and without psychiatric units. Hosp Community Psychiatry 1985; 36:754-763
- 23. Jencks SF, Goldman HH, McGuire TG: Challenges in bringing exempt psychiatric services under a prospective payment system. Hosp Community Psychiatry 1985; 36:764–769
- 24. Mezzich JE, Sharfstein SS: Severity of illness and diagnostic formulation: classifying patients for prospective payment systems. Hosp Community Psychiatry 1985; 36:770–772
- 25. Gordon RE, Vijay J, Sloate SG, et al: Aggravating stress and functional level as predictors of length of psychiatric hospitalization. Hosp Community Psychiatry 1985; 36:773–774
- Martin PY: Program characteristics and residents' length of stay in alcoholic halfway houses. Int J Addict 1981; 16:783–800
- Siegel S: Nonparametric Statistics for the Behavioral Sciences. New York, McGraw-Hill, 1956
- 28. Kenny D: Statistics for the Behavioral and Social Sciences. Boston, Little, Brown, 1987
- Widem P, Pincus HA, Goldman HH, et al: Prospective payment for psychiatric hospitalization: context and background. Hosp Community Psychiatry 1984; 35:447–451
- 30. Goldman HH, Pincus HA, Taube CA, et al: Prospective payment or psychiatric hospitalization? questions and issues. Hosp

Community Psychiatry 1984; 35:460-463

- English JT, Sharfstein SS, Scherl DJ, et al: Diagnosis-related groups and general hospital psychiatry: the APA study. Am J Psychiatry 1986; 143:131–139
- 32. Schumacher DN, Namerow MJ, Parker B, et al: Prospective payment for psychiatry—feasibility and impact. N Engl J Med
- 1986; 315:1331–1336
- Strauss JS, Carpenter WT Jr: The prognosis of schizophrenia: rationale for a multidimensional concept. Schizophr Bull 1978; 4:56-67
- 34. Lamb HR, Peck R: The need for continuing asylum and sanctuary. Hosp Community Psychiatry 1984; 35:798-802

Long-Term Hospital Treatment of Borderline Patients: A Descriptive Outcome Study

Lyle Tucker, Ph.D., Stephen F. Bauer, M.D., Susan Wagner, Ph.D., Dean Harlam, M.D., and Ilene Sher, M.S.W.

The authors report a prospective 2-year outcome study of 40 inpatients with severe personality disorders who were treated on a specialized long-term unit for patients with "borderline conditions." Treatment goals included improving interpersonal relationships and facilitating a lasting discharge from the hospital. Data were collected at admission, discharge, and 1 and 2 years after discharge. The data reflect change from admission to follow-up in impulsivity, psychotherapy, and social adjustment. Mediating effects of length of stay on outcome are discussed.

(Am J Psychiatry 1987; 144:1443-1448)

Pew studies have examined the effectiveness of long-term inpatient treatment. Mattes (1) examined studies that evaluated differences in clinical outcome of varying lengths of stay during psychiatric hospitalizations. His research and that of Glick and Hargreaves (2) suggest that long-term hospital treatment does not reduce the prevalence of subsequent rehospitalizations, nor does it lead to improvement in

Presented at the 138th annual meeting of the American Psychiatric Association, Dallas, May 18–24, 1985. Received Oct. 2, 1986; revised April 1, 1987; accepted April 28, 1987. From the Department of Psychiatry, Cornell University Medical College, the New York Hospital-Cornell Medical Center, Westchester Division, White Plains, N.Y. Address reprint requests to Dr. Tucker, 300 Central Park West, #1B, New York, NY 10024.

The treatment program described in this article was developed under the direction of Dr. Bauer. The authors thank unit staff for their cooperation with data collection and Ernesto Mujica, Matthew Rivman, and William Waked for their work as research assistants. Copyright © 1987 American Psychiatric Association.

have different responses to extended care. For example, little research has been devoted to the outcome of patients specifically diagnosed as having severe character pathology (so-called "borderline conditions") who meet *DSM-III* criteria for borderline personality disorder or structural criteria for borderline personality organization (3). Werble (4) followed 28 of the 51 borderline patients originally studied by Grinker et al.

ity organization (3). Werble (4) followed 28 of the 51 borderline patients originally studied by Grinker et al. (5) 6 to 7 years after hospitalization. Forty-six percent were rehospitalized, and 64% had been in brief psychotherapy. Generally, their social functioning deteriorated and their lives were constricted. Gunderson et al. (6), broadly defining borderline personality, compared 24 borderline patients to schizophrenic patients. Despite differing symptom pictures, there were no significant differences in outcome 2 years after discharge. Five years after discharge, 14 of these patients

social adjustment or to diminished psychopathology. Mattes noted, however, that long-term hospitalization may increase a patient's commitment to continued psychiatric care.

One possible shortcoming of such studies is that long-term hospitalization is in the 1–3-month range. Furthermore, patients are treated on units that are heterogeneous as to length of stay and diagnosis. That is, patients who remain in the hospital for 3 months may be receiving treatment that is extended but similar to that of shorter-term patients, rather than treatment geared to a specific population of longer-term patients. Therefore, such findings may not apply to hospital treatments in which patients stay for 6 to 24 months with the goal of effecting characterologic change rather than symptom reduction.

Another limitation of outcome studies of long-term

hospitalization is that different diagnostic groups may

Am J Psychiatry 144:11, November 1987

were studied and the borderline patients were found to be functioning better socially (7). However, in Pope et al.'s 4- to 7-year follow-up study (8), the outcome of the "pure" borderline group (i.e., those without major affective disorder) approached that of the schizophrenic group in social functioning, residual symptoms, and global assessment. In general, these studies consistently report that borderline patients do not fare well at follow-up. More recently, McGlashan (9) collected retrospective data on 81 borderline patients an average of 15 years after discharge. The outcome of the borderline patients was significantly better than that of a comparison group of schizophrenic patients on most indices including rehospitalization, employment, and social and global functioning.

The investigation reported here was a 2-year outcome study of 40 patients who were admitted over a 3-year period to a specialized long-term inpatient psychiatric unit at the Westchester Division of New York Hospital, a large private psychiatric hospital. This unit treats borderline patients almost exclusively. Patients were referred for long-term treatment of primary personality disorders (axis II, DSM-III) rather than clinical syndromes included in axis I of DSM-III. Not only was the treatment long-term, but the treatment approach was specific to these patients. The principles of this program will be presented briefly and outcome data will follow.

THE TREATMENT PROGRAM

To describe this particular treatment program and its objectives, it is useful to begin with the conceptual basis for understanding these patients. Many view the fundamental difficulty of severely disturbed borderline patients as a disturbance of relationships and relatedness. Kernberg (3, 10) and others (11, 12) proposed models of intrapsychic organization which suggest that the disturbance of human relationships in borderline patients is a manifestation of the patient's problematic conception of self and others. This conception is viewed as a reflection of intrapsychic organization. The treatment program being discussed focuses on interpersonal relationships so that such pathological processes will be visible in the treatment. In other words, the patient's transformation of intrapsychic impairment into interpersonal discord is not only allowed but encouraged.

As with most psychiatric units, this program includes therapy groups, task groups, community meetings, patient government, and therapeutic activities as well as individual psychotherapy. Interpersonal situations arise and may be discussed in one forum or another. What is distinctive here is that those interpersonal situations are the heart of the treatment. Relationships among patients and between the staff and patients are encouraged, with the expectation that they will be explored during the course of treatment. The milieu becomes a microcosm of the person's intrapsy-

chic experience. It is not simply a protective environment for patients in psychotherapy but is intrinsic to the treatment with no one particular treatment (individual psychotherapy, family therapy, etc.) viewed as contributing most to the overall treatment process. The "23 hours" outside individual psychotherapy entail a reexperiencing of the self in relation to others, which allows for frequent working and reworking of interpersonal conflicts.

Another distinctive feature of this unit is that it is long term. When patients are admitted, they typically make a commitment for a minimum of 6 months. Extended treatment is 12 or more months. Intermediate treatment is 6–11 months. Less than 6 months is seen as short hospitalization.

There have been few outcome studies of such long-term hospital treatment. One goal of this investigation was to evaluate the course of patients treated on this unit. Generally speaking, goals of inpatient treatment can vary from crisis intervention, containment, symptom reduction, diagnostic evaluation, and disposition planning to characterologic or structural change. Long-term inpatient treatment of the type considered here has among its goals improving patients' relationships and interpersonal networks while facilitating a lasting discharge from the hospital such that the patient can use outpatient psychotherapy.

METHOD

Forty patients were followed 1 and 2 years after discharge. They represented 65% of the 62 patients with personality disorders who were treated and discharged. Nonresponders included those who were not located and those who refused interviews. Nonresponders were younger (mean=24 years, mode=18, range= 14–54) (χ^2 =6.11, df=2, p<.05), and their stay in the hospital tended to be briefer. While 65% (N=40) of the 62 patients were interviewed the second year following discharge, 81% (N=50) were interviewed the first year following discharge. It seemed most useful to trace the course of a core group of 40 patients on whom data were available at admission as well as 1 and 2 years after discharge. Nine of the 10 patients who were interviewed after their first postdischarge year and not after their second postdischarge year could not be located. At the 2-year point, all of the long-term patients (12 months or more) had responded to both the first- and second-year interviews.

Of the group of 40 patients, 13 (32%) were hospitalized for 12 or more months, 12 (30%) for 6–11 months, and 15 (38%) for less than 6 months (mean length=8.4 months, median=6.2, mode=6.0). Most of the last group left the hospital on their own accord, deciding against extended hospital treatment. All had a DSM-III axis II diagnosis of personality disorder, and all had a structural diagnosis of borderline personality organization (3). Interviews were conducted by experienced clinicians at admission and 1 and 2 years after

discharge. All patients gave signed informed consent. They were interviewed in person at admission and by telephone at follow-up. These interviews were structured to provide postdischarge information in the following areas: 1) current symptoms, 2) treatment, including hospitalization, 3) employment, 4) education, and 5) social life. After each interview, the clinician dictated the interview and completed a questionnaire addressing these areas of functioning. In addition, the dictated postdischarge interviews were rated by two independent research assistants using the Strauss and Carpenter outcome criteria (13). These criteria include ratings of the most usual functioning in the five previously cited areas within the past year.

The Global Assessment Scale (GAS) (14) was also used. The GAS, a composite measure of areas such as symptoms and social and work functioning, is used to evaluate the overall functioning of a patient. The continuum ranges from psychological health to sickness, with numeric counterparts of 100 to 0. Scores were obtained at admission, discharge, and 1 and 2 years after discharge.

RESULTS

Patient Characteristics

The patients were primarily single (73%, N=29), white (100%, N=40) women (85%, N=34) in their teens and 20s (mean=24, mode=19, range=14-45 years), many of whom lived an hour or more from the hospital (38%, N=15). Chart review indicated that 24 of 38 (63%) of the patients came from intact families and that 31 of 40 (78%) had nuclear or extended family histories of psychiatric illness; alcohol abuse (46%, N=18), affective illness (28%, N=11), and personality disorders (18%, N=7) were most prevalent.

On admission, 25 patients (63%) reported depression or suicidal feelings or acts as their presenting problems. Most indicated that they had suicidal or self-destructive feelings, and over half had acted self-destructively or made multiple suicide attempts. Drug abuse was prevalent as well (table 1).

Treatments before admission were numerous and unsuccessful and included multiple short-term hospitalizations, outpatient psychotherapies, and trials with various medications (particularly antidepressants and neuroleptics). One-third (33%, N=13) had had two or more hospitalizations during the 2 years before admission.

Relationships with friends and family were tenuous and stormy. One-third (33%, 12 of 37) of the patients had no close friends, and almost one-half (42%, 15 of 36) rarely socialized. Almost one-third (30%, 11 of 38) felt that their relationships with peers were good, but few patients (13%, five of 40) felt positively about their relationships with their families.

Functioning during the 2 years after discharge was

TABLE 1. Change in 40 Borderline Patients From Admission to 1 and 2 Years After Discharge

	Admission		Α	Year fter harge	2 Years After Discharge	
Variable	N	%	N	%	N	%
Impulsivity						
Suicidal or self-						
destructive feelingsa	32	82 ^b	23	60 ^b	21	60
Suicidal or self-						
destructive behavior ^c	26	65	12	30	10	25.
Drug or alcohol abuse ^d	23	57	13	33	16	41 ^b
Treatment						
Continuous outpatient						
psychotherapy ^c	14	41 ^b	28	73 ^b	2.	71 ^b
Same therapist	20	63 ^b	29	83 ^b	2~	84 ^b
Rehospitalization ^f	25	63	7	17	.;	7
Relationships						
Close friendships ^g	15	40 ^b	25	62 72 ^b	30	75
Frequent social contacts	21	58 ^b	28	72 ^b	29	72
Positive family						
relationships ^h	5	12	18	47	2:	54
Improved family						
relationships			33	83	3 2	82 ^b
Improved peer						
relationships			29	74 ^b	3'	79 ^b

aSignificant change from admission at 1 year and 2 years (χ =4.92, df=1, p<.02).

bPercents are based on less than total N of 40 because information was not available for all patients.

Significant change from admission at 1 year (χ^2 =9.35, df=1, p<.002) and 2 years (χ^2 =11.25, df=1, p<.001).

p<.002) and 2 years ($\chi^{=}$ 11.23, dr=1, p<.001). dSignificant change from admission at 1 year (χ^{2} =4.27, df=1, p<.03).

p<.03). "Significant change from admission at 1 year and 2 years (χ '=5.79, df=1, p<.01).

Significant change from admission at 1 year ($\chi^2=13.1$., df=1, p<.001) and 2 years ($\chi^2=16.96$, df=1, p<.001).

Significant change from admission at 2 years (χ^2 =7.5%, df=1, p<006)

hSignificant change from admission at 1 year ($\chi^2 = 7.58$, df=1, p<.006) and 2 years ($\chi^2 = 14.06$, df=1, p<.001).

compared to preadmission functioning. The McNemar test (15) was the statistic used to analyze this portion of the data. At follow-up, fewer patients reported suicidal or self-destructive feelings. In addition, there was a marked decline in reported suicidal or self-destructive behavior 1 and 2 years after discharge. A similar pattern emerged with drug abuse, but only after the first year.

At follow-up, a majority of the patients were in outpatient psychotherapy. Compared to the 2 years preceding their admission, patients were more likely to be in continuous outpatient psychotherapy bot 1 and 2 years after discharge. There was a trend toward patients remaining in treatment with the same therapist rather than several therapists throughout their postdischarge years. Furthermore, there were fewer rehospitalizations 1 and 2 years after discharge than for equivalent periods of time before admission (table 1).

At follow-up, and particularly after the second postdischarge year, most patients reported having

TABLE 2. Relationship Between Length of Hospitalization and GAS Scores of 40 Borderline Patients at Admission, Discharge, and 1 and 2 Years After Discharge

	Admi	ssion	Disc	harge	1 Year Disch			rs After harge
Length of Stay	Mean	SD	Mean	SD	Mean	SD	Mean	SD
0–5 months	33.60	7.30	40.00	3.78	50.27	9.70	56.27	13.23
6–11 months	28.17	28.58	40.83	10.40	49.58	6.71	59.58	6.89
≥12 months	25.00	9.48	43.54	6.28	52.62	7.98	53.92	15.27
Overall ^a	29.67	9.94	41.56	7.17	50.33	8.15	56.50	12.38

aSignificant change from admission to discharge (t=8.67, df=38, p<.006), 1 year (t=12.52, df=38, p<.001), and 2 years (t=11.93, df=38, p<.001); significant change between 1 and 2 years (t=3.93, df=39, p<.001).

TABLE 3. Relationship Between Length of Hospitalization and Treatment Characteristics of 40 Borderline Patients 1 and 2 Years After Discharge

	N	ot Reho	spital	ized	Cur	rently is	n The	гару	Co	Continuous Therapy 1 Year 2 Years		erapy
	1	Year	2 \	l'ears	1	Year	2 Y	l'ears	1	Year	2 3	Years
Length of Stay	N	%	N	%	N	%	N	%	N	%	N	%
0–5 months	11	73	13 12	87 100	8	53 92	8	53 67	7	54 ^a 83	6	60 ^a 89 ^a
6–11 months ≥12 months	13	100	12	92	11 13	100	9	67 69	10 11	85 85	8	67ª

^aPercents are based on less than total N of 15 because information was not available for all patients.

close friendships. While it was not a statistically significant change, they also visited with friends more frequently. Relationships with family members were evaluated more positively by the patients at both 1 and 2 years after discharge.

The ratings obtained from the GAS and the Strauss and Carpenter outcome criteria reflected general positive change over time. The patients had a mean GAS score of 29.67 at admission (score of 21-30 indicates inability to function in almost all areas), 41.56 and 50.33 at discharge and 1 year after discharge (score of 41-50 indicates serious symptoms or impairment requiring treatment), and 56.50 by the second postdischarge year (score of 51-60 indicates moderate symptoms or general functioning with some difficulty) (table 2). In addition, according to the Strauss and Carpenter outcome criteria, change continued from the first to second postdischarge year (t=2.91, df=38, p<.006). This was particularly true in the categories measuring overall level of functioning (t=3.90, df=38, p<.001) (which reflects improved functioning in relationships, employment, and school as well as decreased symptoms, etc.) and fullness of life (t=5.16, df=37, p<.001).

Length of Stay

Patients were classified as follows on length of stay: 12 or more months was defined as extended, 6–11 months as intermediate, and 0–5 months as short-term hospitalization. No significant differences were found in demographic characteristics among the three groups. None of the long-term patients was rehospitalized within the first postdischarge year, all 13 were in psychotherapy, and a majority (12 of 13) were in

psychotherapy with the same outpatient therapist as at discharge. In addition, these long-term patients had been in psychotherapy continuously with the same therapist throughout the year. Among the intermediate and short-term groups, rehospitalization (26%, N=7) did occur, and there were other disruptions in outpatient psychotherapy. Two years after discharge, only one long-term patient was rehospitalized and most were in outpatient psychotherapy and had been in continuous treatment throughout the 2 years. Results, however, were similar for the other groups as well (table 3).

Furthermore, there was a trend toward lower admission GAS scores for the long-term patients, indicating possibly greater severity of illness at admission. There was evidence of greater change from admission to the first postdischarge year among the longer-term patients (F=4.26, df=39, p<.01) and a similar trend in the second year. The gap between the groups, however, did close somewhat during the second postdischarge year (table 2). There were few differences related to length of stay in the other areas.

DISCUSSION

Few studies have examined the effectiveness of longterm hospital treatment. This was an outcome study of borderline patients treated in a specialized, long-term inpatient program. Treatment goals were directed toward improving interpersonal relationships and facilitating a lasting discharge from the hospital. The data reported here reflect change from admission to follow-up in impulsivity, postdischarge treatment, and social adjustment. Patients were able to remain outside the hospital and were more likely to tolerate and continue outpatient psychotherapy than before hospitalization. In addition, they were better able to develop and maintain relationships than in the past. Change continued from the first to second postdischarge year.

After the first postdischarge year, those hospitalized for more than 1 year were most likely to remain in outpatient psychotherapy and to avoid rehospitalization. We expected that these findings would be sustained and even enhanced in the second postdischarge year, but this proved not to be the case. The data indicate little difference between those hospitalized for shorter or longer stays after the second postdischarge

A straightforward explanation, and one to which many would adhere, is that outcome is not related to length of hospitalization. Nevertheless, this is not the only possible explanation. For example, the findings may stem from methodological problems: a sample size of 40 is small, requiring a robust effect to be evident; the patients with lengthier hospitalizations may have been somewhat more severely impaired on admission; the measures of psychopathology, function, and adaptation used in the study were not specifically geared to the patient population; and a follow-up period of 2 years may be inadequate to assess change and treatment effects in severely ill borderline patients (9).

Although comparisons have been made between short- and long-term hospital treatments (2), it is important to underscore that traditional short- and long-term hospital treatments were not compared in the present study. A short-term stay on our unit is different from that typically described. Short-term treatment on our unit is far longer than the customary 5–7 days on an acute unit, and it is characterized by a different atmosphere, one in which the emphasis is not on symptom suppression and rapid discharge. It is difficult to disentangle the treatment approach from the length of hospitalization when all patients are treated on the same unit. It may be that there is a subgroup of severely ill patients who are able to negotiate the first phase of treatment (i.e., the hospital phase—the social and/or interpersonal network phase) in less time than others. Differentiating this group from the other (i.e., those patients requiring a longer time for the hospital phase) and determining the characteristics of these two groups are important areas for study.

Within any psychotherapeutic treatment, a process is set in motion. In this particular treatment, interpersonal relationships are placed at center stage. The process may be initiated sooner in some patients than in others. Despite relative equivalence in severity of illness, some patients may be more able to use treatment and to end treatment more quickly. This might relate to personality differences, capacity to form attachments, or other, as yet unidentified, factors. A hospital treatment, like the one considered here, sets a process in motion that can be continued after discharge. The initial phase of the treatment is the hospital treatment. The next phase takes place outside the hospital. To the patient's chagrin, treatment does not end at discharge. The hospital treatment is a beginning that facilitates outpatient treatment, which may continue for years. Long-term follow-up is required to be certain about outcome.

Ongoing commitment to and involvement in outpatient psychotherapy continue the values inspired by the treatment program and are considered by us to be a positive outcome. Rehospitalization may not reflect a negative outcome. While decreasing rehospital zation is important, readmissions do not necessarily imply failure. In fact, a brief hospitalization on an act te unit could be a sign of progress for patients who decide to seek admission to a hospital rather than attempt suicide. We are interested in discerning the characteristics of patients who will have a poor outcome without long-term hospital treatment. It is equally important to define what the specific elements of the treatment program are that relate to positive of come.

We can compare this research to previous work in the area. In contrast to Werble's findings (4), we found that fewer patients were rehospitalized, patien s were in continuous versus brief psychotherapy, and their social functioning improved. Although the Gui derson (6) and Carpenter (7) research group found similar outcome among borderline and schizophrenic patients, they did report better social functioning within the borderline group. This seems congruent with our results in which borderline patients improved in social performance. This finding may reflect a greater capacity for social relationships on the part of bo derline patients or our treatment approach, which focused on interpersonal relationships. Some of McGlashin's results (9) converge with our findings, although the designs of our research differ, as do the follow-up periods. Compatible with our results, his bo derline patients showed significantly better improvement in social performance and global functioning than a comparison group of schizophrenic patients. However, after discharge a majority of our patients were in continuous psychotherapy, while McGlashan's patients sought more varied and probably less intensive outpatient psychotherapy.

While not a controlled study, the present investigation contributes to previous research in several ways: 1) the treatment was long-term, i.e., the patients were hospitalized for up to 23 months; 2) the patients were carefully diagnosed by using both clinical (DSM-III) and structural (4) diagnoses; 3) the treatment was specialized and designed for a relatively homogeneous population in a program that can be delineated and articulated; 4) multiple measures of outcome --global and specific, self-reported as well as scored by clinicians and raters—were made with respect to pre- and posthospital functioning; 5) measures addressed symptoms as well as social functioning; and 6) a prospective, rather than retrospective, approach to cata col-

lection was used.

This work is viewed as a first attempt to follow the course of patients who were treated on a long-term unit with a specialized treatment approach. The impact of this type of treatment over time is critical in determining the value of long-term hospitalization.

REFERENCES

- Mattes JA: The optimal length of hospitalization for psychiatric patients: a review of the literature. Hosp Community Psychiatry 1982; 33:824–828
- Glick ID, Hargreaves WA: Psychiatric Hospital Treatment for the 1980's: A Controlled Study of Short Versus Long Hospitalization. Lexington, Mass, DC Heath, 1979
- 3. Kernberg O: The structural diagnosis of borderline personality organization, in Borderline Personality Disorders: The Concept, the Syndrome, the Patient. Edited by Hartocollis P. New York, International Universities Press, 1978
- 4. Werble B: Second follow-up study of borderline patients. Arch Gen Psychiatry 1970; 23:3-7
- Grinker RR, Werble B, Drye RC: The Borderline Syndrome. New York, Basic Books, 1968
- 6. Gunderson JG, Carpenter WT Jr, Strauss JS: Borderline and schizophrenic patients: a comparative study. Am J Psychiatry

- 1975; 132:1257-1264
- Carpenter WT, Gunderson JG: Five year follow-up comparison of borderline and schizophrenic patients. Compr Psychiatry 1977; 18:567-571
- Pope HG, Jonas JM, Hudson JI, et al: The validity of DSM-III borderline personality disorder. Arch Gen Psychiatry 1983; 40: 23-30
- McGlashan TH: The Chestnut Lodge follow-up study, III: long-term outcome of borderline personalities. Arch Gen Psychiatry 1986; 43:20–30
- Kernberg O: Structural derivatives of object relations. Int J Psychoanal 1966; 47:236–253
- Jacobson E: The Self and the Object World. New York, International Universities Press, 1964
- Mahler M: A study of the separation-individuation process and its possible application to borderline phenomena in the psychoanalytic situation. Psychoanal Study Child 1971; 26:403–424
- Hawk AL, Carpenter WT Jr, Strauss JS: Diagnostic criteria and five-year outcome in schizophrenia: a report from the International Pilot Study of Schizophrenia. Arch Gen Psychiatry 1975; 32:343–347
- 14. Endicott J, Spitzer RL, Fliess JL, et al: The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbances. Arch Gen Psychiatry 1976; 33:766-771
- Hays WL: Statistics for the Social Sciences. New York, Holt, Rinehart & Winston, 1973

Effects of Electrode Placement on the Efficacy of Titrated, Low-Dose ECT

Harold A. Sackeim, Ph.D., Paolo Decina, M.D., Maureen Kanzler, Ph.D., Barbara Kerr, M.S.W., and Sidney Malitz, M.D.

This double-blind, random-assignment study contrasted the relative efficacy of bilateral and unilateral right ECT with a low-dose titration procedure. In 52 patients with primary major depressive disorder, bilateral ECT was markedly superior in short-term symptom reduction to unilateral right ECT. The two conditions did not differ in the duration of generalized seizures or in the number of treatments administered to achieve clinical response. The findings challenge the claim that the elicitation of generalized seizure is, in and of itself, sufficient for the antidepressant properties of ECT. Rather, a dose in excess of seizure threshold may contribute to the efficacy of ECT, particularly with a unilateral right electrode placement. (Am J Psychiatry 1987; 144:1449-1455)

he relative efficacy of unilateral right ECT and bilateral ECT continues to be a source of controversy. Over the last 30 years, the antidepressant properties of these two modalities have been contrasted in at least 35 clinical trials. Most researchers have concluded that the two modalities are equivalent or nearly equivalent in therapeutic benefits, often with the caveat that the more methodologically sound the clinical trial, the less likely that differences in efficacy are obtained (1-4). In line with this view and given the differential effects of the modalities on cognitive functioning, the APA task force report (5) strongly recom-

mended the use of unilateral ECT, Fraser (6) claimed Received March 28, 1986; revised Oct. 15, 1986, and March 30, 1987; accepted May 7, 1987. From the Department of Biological Psychiatry, New York State Psychiatric Institute; the Department of Psychiatry, College of Physicians and Surgeons, Columbia University, New York; and the Department of Psychology, New York University, New York. Address reprint requests to Dr. Sackeim, Department of Biological Psychiatry, New York State Psychiatric Institute, 722 West 168th St., New York, NY 10032.

Supported in part by NIMH grant MH-35636. The authors thank the staff of the 7th floor (South), New York State Psychiatric Institute, for the care extended to the patients participating in this study; and L. Calev, R.N., N. Hopkins, R.N., D. Kahn, M.D., C. Lee, M.D., P. Neeley, M.A., and S. Portnoy, Ph.D., for facilitating various aspects of the research.

Copyright © 1987 American Psychiatric Association.

in his clinical guide to ECT that "there is nothing to recommend the use of bilateral ECT," and Stromgren (7) has questioned whether bilateral ECT is ever indicated. In contrast, the available evidence indicates that bilateral ECT is far more frequently administered to patients in the United States and Great Britain, with perhaps 75% of clinicians relying exclusively on the bilateral placement (5, 8).

The study described here differed from previous comparative trials in the method of ECT administration. Traditionally, the dose or intensity of electrical stimulation administered in these trials has been kept the same for all patients, regardless of modality (e.g., 9–12). This study involved rigorous titration of electrical dose throughout the treatment course to just above seizure threshold—the minimal stimulus intensity necessary to produce a seizure. This was done primarily for two reasons. First, there have been longstanding indications that the magnitude of a number of the adverse cognitive side effects of ECT is related to the intensity of electrical stimulation or the type of electrical wave form used (13-15). We have reported that the minimal electrical dose necessary to elicit seizures in this sample varied 12-fold (16). This indicates that when a fixed dose is used for all patients, it must be considerably above the threshold for low-threshold patients in order to successfully elicit seizures in high-threshold patients. Therefore, one aim of this study was to evaluate the cognitive consequences of a low-dose ECT titration procedure

The second reason for implementing titration of ECT dose was as a methodological control in evaluating the therapeutic properties of bilateral and unilateral ECT. There have been longstanding indications that with brief-pulse stimulation, a lower seizure threshold may characterize unilateral ECT (18-21). Indeed, we have previously reported that in this sample bilateral ECT exceeded unilateral right ECT by 69.79% in the average minimal electrical intensity necessary to elicit a seizure (16). There have been suggestions that the efficacy of ECT is related in part to electrical dose factors (22-24). To the extent that dose in excess of seizure threshold contributes to the efficacy of ECT, previous studies using a single electrical intensity and brief-pulse stimulation may have been

TABLE 1. Demographic and Psychiatric Characteristics of 52 Patients Given Bilateral or Unilateral ECT

	Total Sample (N=52)		Bilateral ECT (N=27)			Unilateral Right ECT (N=25)	
Characteristic	Mean	SD	Mean	SD	Mean	SD	
Age (years)	61.33	13.14	60.78	10.69	61.92	15.33	
Education (years)	13.69	4.25	12.92	4.20	14.44	4.18	
Socioeconomic status ^a	2.89	1.45	3.22	1.52	2.52	1.27	
Length of current episode (weeks) ^b	36.77	29.61	39.07	32.65	34.28	25.70	
Previous affective episodes ^c	3.85	3.13	4.48	3.48	3.16	2.53	
Previous hospitalizations	2.39	2.79	2.63	3.31	2.12	2.05	
Age at first affective episode (years)	44.02	16.13	43.26	13.98	44.84	18.13	

 $^{^{}a}$ Range=1-5.

biased in favor of unilateral ECT. Therefore, the second aim of this study and the object of this report were to contrast the relative therapeutic properties of the two modalities when each was administered with the minimal electrical dose necessary to produce a seizure.

In addition, other methodological controls were used in this trial. These included the adoption of a priori criteria for designation as treatment responder or nonresponder, the requirement of a minimum number of treatments before classification as a nonresponder, and the use of a blind clinical team to determine treatment length in all patients. In this way, both treatment efficacy (quality and proportion of patient response) and treatment efficiency (25) (number of treatments required for clinical response, i.e., speed of response) were examined.

METHOD

Patients

The sample comprised 52 inpatients (18 men and 34 women) who met the Research Diagnostic Criteria (RDC) (26) for primary major depressive disorder on the basis of interviews with the Schedule for Affective Disorders and Schizophrenia (27). Other inclusion criteria were a minimum pretreatment score of 18 on the Hamilton Rating Scale for Depression (24-item), no ECT within the past year, no history of organic brain syndrome or substance abuse, no current serious medical condition, and willingness to provide informed consent. Patients were randomly assigned to bilateral ECT (N=27; 10 men and 17 women) or right unilateral ECT (N=25; eight men and 17 women). The bilateral ECT group consisted of six bipolar and 21 unipolar patients; four patients were psychotic (definite). The unilateral right ECT group consisted of five bipolar and 20 unipolar patients; three patients were psychotic (definite). Demographic and psychiatric characteristics of the sample are presented in table 1. The two groups did not differ significantly on any variable. Criteria for an adequate pharmacotherapy trial for the index episode before ECT were a minimum of 5 weeks of tricyclic antidepressant treatment, during which time a dose equivalent to at least 250 mg/day of imipramine was reached for at least 2 weeks. Of the 22 patients who did not meet these criteria, 12 were referred for ECT in the context of psychotic depression (seven with a definite diagnosis and five with a probable diagnosis according to the RDC), and 12 received bilateral and 10 unilateral right ECT. Six patients presented limiting side effects that precluded adequate tricyclic antidepressant therapy. Of these 22 patients, the sample included three lefthanders (one received bilateral and two unilateral right ECT), all of whom manifested right sensory field (left hemisphere) advantages on dichotic-listening and tachistoscopic-viewing assessments of language lateralization.

Procedure

Patients were withdrawn from all psychotropic medication except lorazepam (1 mg every 12 hours, as needed) at least 5 days before the first treatment. Lorazepam was withheld at least 8 hours before each treatment and patients received nothing by mouth during this time. Either thiopental or methohexital was used as an anesthetic agent, with within-patient random assignment to an agent at each treatment session. Anesthetic dose was kept low to minimize effects on seizure threshold. In the first session with an agent, the doses were 1.9 mg/kg and 0.75 mg/kg for thiopental and methohexital, respectively. In subsequent sessions, dose was titrated as a function of response to the anesthetic. Succinylcholine served as the muscle relaxant; the dose at the first session was 0.5 mg/kg. Atropine, 0.4 mg i.v., was administered approximately 2 minutes before the anesthetic. Patients were oxygenated from the time of the administration of the anesthetic until postictal resumption of spontaneous respiration. The standard bifrontotemporal placement was used in the bilateral ECT group, and the d'Elia placement (28) was used for unilateral right ECT. ECT was administered at a schedule of three treatments per week.

^bMaximum of 104 weeks permitted.

^cMaximum of 10 permitted.

TABLE 2. Treatment Characteristics of 52 Patients Given Bilateral or Unilateral ECT

		al ECT =27)	Unilateral Right ECT (N=25)		
Characteristic	Mean	SD	Mean	SD	
Methohexital dose (mg)	53.97	14.65	50.44	14.48	
Thiopental dose (mg)	114.56	35.80	125.02	43.96	
Succinylcholine dose (mg)	37.64	16.04	32.53	10.80	
Charge (mQ) ^a	192.32	94.63	113.27	52.63	
Joules (watt-seconds)b	24.24	8.59	17.58	6.25	
Subconvulsive administrations/ treatment session ^c Motor seizure duration/	0.64	0.30	0.44	0.22	
treatment session (seconds) EEG seizure duration/	48.69	13.66	46.84	13.18	
treatment session (seconds) Total EEG seizure time	61.44	18.94	59.55	20.91	
(seconds)	561.56	212.38	558.96	250.55	

at=3.61, df=50, p<.001; all comparisons by two-tailed t test.

ct=2.63, df=50, p=.01.

The procedures used for seizure induction and dose titration have been detailed previously (16). Briefly, a constant-current, square-wave, brief-pulse device (MECTA) was used. By using a method of limits procedure, subconvulsive electrical intensities were deliberately administered in some sessions to determine the minimal electrical dose necessary to produce an adequate generalized tonic-clonic seizure. In the first session, a dose was selected that rarely elicited a seizure (eight of 52 patients, 15.38%). After a subconvulsive administration, a minimum of 40 seconds elapsed before restimulation at a higher intensity. The dose level that resulted in a generalized seizure in the first session was again administered at the next treatment. If this level successfully produced a seizure, a lower level was used in the subsequent treatment. This procedure was continued throughout the treatment course. The frequency of brief pulses was the primary variable manipulated to determine dose. However, in patients with high seizure thresholds, the duration of the pulse train was also varied. The tourniquet method and the recording of a left frontal EEG channel were used to time seizure duration. The criterion for an adequate seizure was at least 25 seconds of motor manifestation. In rare instances in which the motor manifestation was indeterminate, a minimum of 30 seconds of EEG seizure activity was required. Nongeneralized (e.g., Jacksonian seizures) or generalized seizures not meeting the duration criteria occurred in less than 3% of the sessions. In such cases, a 90-second interval was required before restimulation at a higher intensity took place.

Table 2 presents treatment characteristics of the two groups. The groups differed in the electrical dose that resulted in seizures whether assessed in units of charge (mQ) or Joules (watt-seconds). Seizure threshold typically increases during a course of ECT. The mean±SD increase in the bilateral ECT group (87.1% ±58.9%)

exceeded that in the unilateral ECT group $(40.3\% \pm 32.4\%)$ (t=3.66, df=50, p<.001). As a consequence of a higher initial seizure threshold and a greater cumulative increase in seizure threshold, significantly more subconvulsive stimulations were required in the bilateral group $(0.47\% \pm 0.16\%$ versus $0.38\% \pm 0.16\%$; t=2.08, df=50, p<.05). The two groups did not differ in the other treatment characteristics in table 2, including the duration of seizures assessed by either motor or EEG manifestations.

Clinical Evaluation

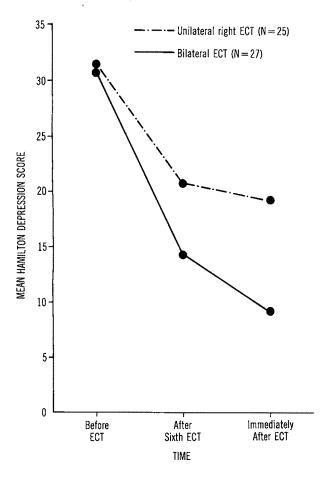
Both patients and the clinical evaluation tears were blind to electrode placement. The team interviewed patients before treatment and the afternoon after the first, third, fifth, sixth, and every subsequent treatment, as well as 1 week after the final treatment in the case of patients who met the initial criteria for classification as ECT responders. Interviews were conducted between 1:00 and 4:00 p.m. The team was composed of a senior clinical psychologist and a senior social worker who independently completed Hamilton depression scale ratings on the basis of the joint interviews. Reliabilities for the Hamilton scores before treatment, after the sixth ECT, and immediately after treatment were .90, .98, and .99, respectively. Analyses of Hamilton depression scores were based on rater means.

The a priori criteria used to classify patients as ECT responders were 1) a minimum decrease of at least 60% in Hamilton depression scores from pretreatment to immediately after the final treatment, 2) a maximum posttreatment score of 16, and 3) maintenance of the minimum 60% reduction for at least 1 week after ECT while free of psychotropic medication. Therefore, while the outcome data pertained to at most a 1-week period after ECT, the use of other forms of somatic treatment for continuation therapy could not influence the findings.

Treatment length was determined by the blind clinical evaluation team. It was required that patients receive a minimum of 10 treatments before being classified as nonresponders. Longer courses were permitted when justified by indications of continued clinical improvement. For patients who met the initial criteria for response, treatment could be terminated at any point once the team determined that likely maximal improvement had been achieved. Exceptions to this practice occurred only when patients withdrew consent for further ECT. Before the trial, the criterion was adopted that to be included in the clinical outcome data, a patient who had rescinded consent or in whom ECT was terminated for reasons other than clinical response (e.g., medical complications) had to receive at least five treatments. Four patients withdrew consent for further ECT and dropped out of the study. All four were classified as nonresponders to unilateral right ECT; two had received six treatments, one seven treatments, and one eight treatments.

bt=3.11, df=50, p<.005.

FIGURE 1. Hamilton Depression Scores Before ECT, After the Sixth ECT, and Immediately After ECT Treatment in 52 Patients Given Bilateral or Unilateral ECT



RESULTS

Efficacy

A repeated measures analysis of variance (ANOVA) on the Hamilton ratings, with treatment modality (unilateral versus bilateral) and assessment period (pretreatment, after the sixth ECT, and immediately after treatment) as factors, revealed main effects of modality (F=8.96, df=1, 50, p=.005) and assessment period (F=77.74, df=2, 100, p<.001) and a significant interaction (F=5.25, df=1, 50, p=.007). The interaction is illustrated in figure 1. The two groups did not differ at pretreatment baseline. The bilateral ECT group had significantly lower Hamilton ratings both after the sixth treatment (t=2.54, df=50, p=.02) and immediately after treatment (t=3.50, df=50, p<.001). Immediately after treatment the difference between modalities in Hamilton ratings averaged 10.11 points.

Those patients who met the initial criteria for clinical response (N=29) were reevaluated 1 week after the end of the ECT course while they were medication free. To ensure that the modality difference in efficacy was not due to transient mood improvement or mo-

dality differences in acute side effects, a modified posttreatment Hamilton score was created by using the ratings from the reevaluation of the initial response subgroup and the immediate posttreatment ratings of nonresponders. A repeated measures ANOVA (Modality by Assessment Period) revealed main effects of modality (F=10.51, df=1, 50, p=.003) and of assessment period (F=72.44, df=2, 100, p<.001) and a significant interaction (F=5.63, df=2, 100, p=.005). The modalities also differed with respect to the modified posttreatment Hamilton scores (mean±SD scores =19.96±11.66 for unilateral right ECT and 9.33±7.41 for bilateral ECT; t=3.87, df=50, p<.001).

To corroborate further the modality difference in efficacy, hierarchical regression analyses were performed, predicting both immediate posttreatment Hamilton ratings and the posttreatment ratings modified for patients who met the initial criteria for clinical response. As indicated in table 3, the predictors were pretreatment Hamilton score, psychiatric history variables, demographic variables, and modality (which was entered last). In both analyses modality accounted for a significant proportion of the variance after the effects of all other predictors had been removed. The only other variable significantly associated with outcome was patient age. With respect to the 1-week posttreatment score, older patients showed stronger clinical improvement.

Twenty-nine of 52 patients (55.77%) met the initial criteria for clinical response. Three patients (two in the unilateral group and one in the bilateral group) relapsed during the first week after treatment, resulting in 26 patients who met the final criteria for clinical response. Nineteen of the 27 patients (70.37%) in the bilateral group were so classified, compared with only seven of 25 (28.0%) in the unilateral right group. The difference in distributions was significant (χ^2 =9.32, df=1, p=.002).

Efficiency

An equivalent number of treatments was administered to the total bilateral ECT group (mean ± SD= 9.44±2.67) and the total unilateral right ECT group (9.44±2.25). An ANOVA conducted on the number of treatments administered, with modality and response classification as factors, yielded no significant effects, although there was a trend for nonresponders (N=26) to have a longer course than responders (N=26) (mean \pm SD ECTs = 10.04 ± 2.31 versus 8.85 ± 2.49 ; F=3.50, df=1, 48, p=.07). Speed of recovery, as indexed by length of the treatment course, did not differ in patients classified as responders to bilateral ECT (N=19) or unilateral right ECT (N=7) (mean ± SD ECTs = 8.74 ± 2.45 versus 9.14 ± 2.59). However, the significance of the comparison of the therapeutic efficiency of the two modalities was limited by the fact that relatively few patients were classified as responders to unilateral right ECT.

TABLE 3. Regression Analyses Predicting Posttreatment Hamilton Depression Scores of 52 Patients Given ECT

	Immediate Pos	ttreatment Hamil	ton Score_	Modified Posttreatment Hamilton Score			
Predictor	Standardized Coefficient	p (df=41)	Unique R ²	Standardized Coefficient	(df=41)	Unique R ²	
Pretreatment Hamilton score	.13	n.s.	.00	.07	n.s.	.00	
Length of current episode	.17	n.s.	.02	.12	n.s.	.01	
Number of previous episodes	.03	n.s.	.00	.02	n.s.	.00	
Age at first episode	.21	n.s.	.02	.27	n.s.	.02	
Past ECT ^a	.12	n.s.	.01	.02	n.s.	.00	
Sex ^b	17	n.s.	.02	24	n.s.	.04	
Age	33	n.s.	.04	46	.03	.08	
Education	28	n.s.	.03	31	n.s.	.03	
Socioeconomic status	21	n.s.	.02	24	n.s.	.02	
Modality ^c	45	.002	.17	51	<.001	.21	

 $^{^{}a}1 = yes, 2 = no.$

DISCUSSION

The findings indicate that when a dose titration technique is used, such that patients are given the minimal electrical intensity necessary to produce a generalized seizure, bilateral ECT is markedly superior to unilateral right ECT in short-term efficacy. The magnitude of the efficacy difference was of clinical significance and was observed both in continuous measures of change in symptoms and in dichotomous patient classification as ECT responder and nonresponder.

Traditionally, the duration of the tonic-clonic seizure has been the index most often used to assess the adequacy of treatments (2, 5, 13). A conservative criterion was adopted here, requiring at each treatment a continuous period of 25 seconds of motor manifestation of generalized seizure. The two modalities did not differ on any measure of seizure duration. Analyses of the postictal increases in blood pressure and heart rate have also revealed no difference between the modalities (29).

While some previous studies have found therapeutic advantages for bilateral ECT (e.g., reference 9), the majority of comparative trials have failed to observe significant differences between bilateral and unilateral right ECT (1-3). Two factors might be considered in accounting for this trial's unusually large difference in efficacy. First, the administration of subconvulsive electrical intensities may have diminished the efficacy of the unilateral right ECT. While this possibility cannot be ruled out absolutely, it is noteworthy that the bilateral ECT group was characterized by a higher seizure threshold at the beginning of the ECT course and manifested a larger increase in seizure threshold during the ECT course (16). This resulted in the bilateral group receiving more subconvulsive stimulations than the unilateral group (table 2). Thus it seems unlikely that the weak therapeutic properties of the unilateral right ECT were attributable to the administration of subconvulsive intensities in some sessions. While it is possible that the higher rate of subconvulsive stimulation enhanced the efficacy of bilateral ECT, this also seems unlikely. Subconvulsive stimulation alone has been found to be therapeutically weak when compared to suprathreshold stimulation (30, 31). Furthermore, what was unusual was not the response rate with bilateral ECT, but the relative ineffectiveness of unilateral right ECT.

The second factor pertains to the use of love-dose ECT. The intensity of the ECT stimulus at seizure elicitation may contribute to the efficacy of ECT, particularly with a unilateral right electrode placement. With the dose just above threshold, and with brief-pulse, constant-current stimulation, it appears that bilateral ECT remains an effective treatment, whereas the therapeutic properties of unilateral right ECT are weak. Previous comparative trials typically have administered the same electrical dose to all patients. The doses used have usually been considerably above seizure threshold to ensure that virtually all patients have adequate seizures at each treatment (9– 12). Under these circumstances, the two modalities typically have been found to be equivalent or nearly equivalent in efficacy. Our findings suggest that the degree to which dose exceeds seizure threshold may contribute more to the efficacy of unilateral right than to bilateral ECT. Indeed, since with brief-pulse, constant-current stimulation a lower electrical intensity is required to elicit seizures with unilateral right ECT than with bilateral ECT, previous trials with this type of stimulation and with a fixed dose may have been biased in favor of unilateral right ECT.

There have been previous indications that close or waveform factors may have an impact on the efficacy of ECT (22, 23). The Lambourn and Gill (32) real versus sham trial stands as an exception in failing to show a short-term therapeutic advantage for real ECT compared to sham administration. In that trial a unilateral right electrode placement and a low-dose (ultrabrief-pulse) technique were used in the real ECT condition. With the view that the use of this combination may have weakened the effectiveness of real ECT, Gregory et al. (33) recently conducted another con-

b1=male, 2=female.

c1=unilateral right, 2=bilateral.

trolled trial that contrasted bilateral, unilateral right, and sham ECT, in which higher intensity stimulation was administered in the first two conditions. Unilateral right ECT was found to be clearly superior to sham ECT, although fewer treatments were necessary with bilateral ECT to achieve comparable symptom reduction.

The suggestion that dose factors may have more of an impact on the efficacy of unilateral ECT than on bilateral ECT does not imply that stimulus intensity or wave form lack influence on the therapeutic properties of bilateral ECT. Cronholm and Ottosson (34) found that low-intensity, ultrabrief-pulse bilateral ECT was less effective than higher-intensity bilateral ECT administered with a modified sinusoidal wave form. Robin and De Tissera (24) reported that with bilateral ECT, patients required fewer treatments with highintensity, chopped sine wave stimulation or highintensity, brief-pulse stimulation than with low-intensity, brief-pulse stimulation in order to achieve comparable reduction in symptoms. Ottosson (13) conducted the only study to date contrasting the efficacy of stimulus dose intensity conditions with the stimulus wave form kept constant. Bilateral ECT patients were given a stimulus dose that was moderately or markedly above seizure threshold. While this trial is usually cited as indicating no effect of dose on clinical outcome, Ottosson noted that speed of symptom reduction tended to be faster in the group given a stimulus dose that was markedly above threshold. Further, the moderately suprathreshold condition involved no subconvulsive stimulations despite the fact that the same stimulus intensity was administered to all patients in the group; this finding suggests that the stimulus intensity may have been near the top of a hypothetical therapeutic window in terms of dose.

In short, as dose exceeds seizure threshold, the efficacy of unilateral right ECT may increase. The impact on efficacy of dose in excess of threshold should be greater for unilateral right ECT than for bilateral ECT. Prospective investigation is needed to test this view and, if it is correct, to establish the nature of a therapeutic window in terms of dose for each modality.

Regardless of the reasons why titrated, low-dose unilateral right ECT was therapeutically weak, the findings challenge the traditional claim that elicitation of generalized seizures provides the necessary and sufficient conditions for the therapeutic effects of ECT (6, 13, 35). Generalized seizures of comparable duration were elicited with both modalities, yet there was a pronounced difference in efficacy. It would appear, therefore, that the generalized seizure may be necessary, but not sufficient, for therapeutic effects. Indeed, the high rate of nonresponse in the unilateral right ECT group may provide a method for isolating neurophysiological and neurochemical events that are related particularly to therapeutic processes, over and above those which accompany seizure elicitation in general. Elsewhere (36, 37) we have discussed how

dose factors may alter the nature of the seizure discharge and associated neurobiological processes.

The therapeutic response rate with titrated, lowdose, unilateral right ECT was a disappointment. At the outset of this trial we had hoped that such a combination would maintain the therapeutic benefits of ECT while minimizing cognitive side effects (38). We note, however, that titrated, low-dose, bilateral ECT was an effective treatment which appeared to be associated with less acute cognitive disturbance than is observed with traditional forms of administration (17). If, as we suggest, augmentation of dose particularly enhances the efficacy of unilateral right ECT, the choice of treatment modality ultimately may be based on comparisons of side effect profiles when each modality is administered under conditions that maximize therapeutic benefits.

REFERENCES

- 1. D'Elia G, Raotma BH: Is unilateral ECT less effective than bilateral ECT? Br J Psychiatry 1975; 126:83-89
- Fink M: Convulsive Therapy: Theory and Practice. New York, Raven Press, 1979
- 3. Janicak PG, Davis JM, Gibbons RD, et al: Efficacy of ECT: a meta-analysis. Am J Psychiatry 1985; 142:297-302
- Welch C, Weiner R, Weir D, et al: Efficacy of ECT in the treatment of depression: waveform and electrode placement considerations. Psychopharmacol Bull 1982; 18:31-34
- 5. American Psychiatric Association Task Force Report 14: Elec-
- troconvulsive Therapy. Washington, DC, APA, 1978 Fraser RM: ECT: A Clinical Guide. Chichester, England, John Wiley & Sons, 1982
- Stromgren L: Is bilateral ECT ever indicated? Acta Psychiatr Scand 1984; 69:484-490
- Pippard J, Ellam L: Electroconvulsive Treatment in Great Britain, 1980: A Report to the Royal College of Psychiatrists. Headley, England, Gaskell Press, 1981
- 9. Abrams R, Taylor MA, Faber R, et al: Bilateral versus unilateral electroconvulsive therapy: efficacy in melancholia. Am J Psychiatry 1983; 140:463-465
- 10. Cronin D, Bodley P, Potts L, et al: Unilateral and bilateral ECT: a study of memory disturbance and relief from depression. J Neurol Neurosurg Psychiatry 1970; 33:705-713
- 11. Strain JJ, Brunschwig L, Duffy JP, et al: Comparison of therapeutic effects and memory changes with bilateral and unilateral ECT. Am J Psychiatry 1968; 125:294-304
- 12. Zinkin S, Birtchnell J: Unilateral electroconvulsive therapy: its effects on memory and its therapeutic efficacy. Br J Psychiatry 1968; 114:973–988
- 13. Ottosson J-O: Experimental Studies of the Mode of Action of Electroconvulsive Therapy. Acta Psychiatr Neurol Scand Suppl 145, 1960
- 14. Valentine M, Keddie K, Dunne D: A comparison of techniques in electroconvulsive therapy. Br J Psychiatry 1968; 114:989-
- 15. Weiner RD: Does electroconvulsive therapy cause brain damage? Behav Brain Sci 1984; 7:1-54
- 16. Sackeim H, Decina P, Prohovnik I, et al: Seizure threshold in electroconvulsive therapy: effects of sex, age, electrode placement, and number of treatments. Arch Gen Psychiatry 1987; 44:355-360
- 17. Sackeim H, Portnoy S, Neeley P, et al: Cognitive consequences of low dosage ECT. Ann NY Acad Sci 1986; 462:326-340
- 18. Goldman D: Brief stimulus electric shock therapy. J Nerv Ment Dis 1949; 110:36-45
- 19. Liberson W, Wilcox P: Electric convulsive therapy: comparison of "brief stimulus technique" with Friedman-Wilcox-Reiter

- technique. Digest of Neurology and Psychiatry 1945; 13:292-302
- Weaver L, Ives J, Williams R: The threshold number of pulses in bilateral and unilateral ECT. Biol Psychiatry 1978; 13:227-241
- Weiner RD: ECT and seizure threshold: effects of stimulus waveform and electrode placement. Biol Psychiatry 1980; 15: 225-241
- Abrams R, Taylor MA: Diencephalic stimulation and the effects of ECT in endogenous depression. Br J Psychiatry 1976; 129: 482–485
- Deakin JF: Antidepressant effects of electroconvulsive therapy: current or seizure? (editorial). Br Med J 1983; 286:1083–1084
- Robin A, De Tissera S: A double-blind controlled comparison of the therapeutic effects of low and high energy electroconvulsive therapies. Br J Psychiatry 1982; 141:357–366
- Rich C, Spiker D, Jewell S, et al: The efficiency of ECT, I: response rate in depressive episodes. Psychiatry Res 1984; 11: 167–176
- Spitzer R, Endicott J, Robins E: Research Diagnostic Criteria: rationale and reliability. Arch Gen Psychiatry 1978; 35:773–782
- Endicott J, Spitzer R: A diagnostic interview: the Schedule for Affective Disorders and Schizophrenia. Arch Gen Psychiatry 1978; 35:837–844
- D'Elia G: Unilateral electroconvulsive therapy. Acta Psychiatr Scand Suppl 1970; 215:5-98
- 29. Prudic J, Sackeim HA, Decina P, et al: Acute effects of ECT on cardiovascular functioning: relations to patient and treatment

- variables. Acta Psychiatr Scand 1987; 75:344-351
- 30. Fink M, Kahn RL, Green M: Experimental studies of the electroshock process. Dis Nerv Syst 1958; 19:113-118
- 31. Ulett GA, Smith K, Gleser GC: Evaluation of convulsive and subconvulsive shock therapies utilizing a control group. Am J Psychiatry 1956; 112:795–802
- 32. Lambourn J, Gill D: A controlled comparison of simulated and real ECT. Br J Psychiatry 1978; 133:514-519
- Gregory S, Shawcross C, Gill D: The Nottingham ECT study: a double-blind comparison of bilateral, unilateral and simulated ECT in depressive illness. Br J Psychiatry 1985; 146:520–524
- 34. Cronholm B, Ottosson J-O: Ultrabrief stimulus technique in electroconvulsive therapy, II: comparative studies of the apeutic effects and memory disturbance in treatment of endogenous depression with the Elther ES electroshock apparatus and Siemens Konvulsator. J Nerv Ment Dis 1963; 137:268–276
- D'Elia G, Ottosson J-O, Stromgren L: Present practice of electroconvulsive therapy in Scandinavia. Arch Gen Psychiatry 1983; 40:577-581
- Sackeim HA, Decina P, Prohovnik I, et al: Dosage seizure threshold and the efficacy of ECT. Ann NY Acad Sci 1986; 462: 398-410
- Malitz S, Sackeim H, Decina P: ECT in the treatment of major affective disorders: clinical and basic research issues. Psychiatr J Univ Ottawa 1982; 7:126–134
- Sackeim HA, Mukherjee S: Neurophysiological varie bility in the effects of the ECT stimulus. Convulsive Therapy 1986; 2: 267–276

Perceptual and Cognitive Abnormalities in Bulimia

Pauline S. Powers, M.D., Richard G. Schulman, Ph.D., Alice A. Gleghorn, M.A., and Mark E. Prange, Ph.D.

The authors compared 55 bulimic subjects and 55 normal control subjects using the Beck Depression Inventory, a new scale designed to detect cognitive distortions (the Bulimia Cognitive Distortion Scale), and several perceptual and attitudinal measures of body image. There were significant differences between the bulimic and control groups on all measures except estimates of face width. These findings are discussed in terms of a multifactorial theory of the psychopathogenesis of bulimia. (Am J Psychiatry 1987; 144:1456–1460)

B ulimia is a serious and poorly understood psychiatric disorder that affects primarily teenage girls and young women. Estimates of prevalence among college coeds range from 8% (1) to 19% (2). DSM-III criteria for bulimia include recurrent episodes of binge eating, the possibility of purging behavior, awareness of the abnormality of the eating pattern, and depressed mood and self-deprecating thoughts after eating binges. DSM-III-R criteria specify that the individual regularly uses methods to prevent weight gain (such as self-induced vomiting) and that there is persistent overconcern with body shape and weight.

Body image is the inner mental image of one's body and the sum of one's emotional attitudes toward that image. The mental picture, or perceptual aspect, of body image can be thought of as a blueprint representing one's body as a whole, as well as its parts, including their size, shape, and spatial relationships, and develops in concert with maturation of the CNS. The attitudinal aspects of body image arise from early interpersonal and family relationships and cultural influences; these emotional aspects of body image may affect the accuracy of the perceptual aspect of body image. Touch and kinesthesia are probably more important than vision in the early development of body image, since the earliest experiences of the infant

involve holding, cuddling, and feeding, and it is during these early months that a rudimentary body image develops; the sensory pathways subserving the tactile and kinesthetic senses are the first to complete myelinization (3).

Body image has been studied extensively among anorexia nervosa patients, and some of the seminal work in this area (including development of several instruments to measure the perceptual aspect of body image) was with obese patients. Although it is widely believed that individuals with bulimia have abnormalities in body image, there have been few studies of the body image of this group (4). Most studies of anorexia nervosa (5, 6), but not all (7), have found that anorexic individuals overestimate their size. There is general agreement that the severity of body image misperception is related to a poor prognosis in both anorexic (8) and obese (9) patients. Overestimation of body image size has also been linked to a variety of clinical symptoms including the presence of vomiting and other types of purging behavior (10). A common defect of all the studies of the perceptual aspect of body image is that the measures rely primarily on vision, rather than on touch or kinesthesia. These measures may underestimate the severity of body image disturbances.

There is evidence that cognition plays an important role in the development and maintenance of bulimia. Many bulimic individuals are in a state of semistarvation. Keys et al. (11) noted that characteristic cognitive symptoms, including preoccupation with food, develop during semistarvation. Garner and Bemis (12), using categories developed by Beck (13) for depressed patients, postulated that certain types of cognitive distortions occur in anorexia nervosa. These categories include selective abstraction, overgeneralization, allor-none thinking, magnification, and superstitious thinking. Fernandez (14) suggested that bulimic individuals may have similar cognitive distortions.

Recent studies have found that depression may be a critical dimension of bulimia. Bulimic individuals often meet stringent criteria for major depression (15), and there is a greater family history of depression among bulimic than among normal control subjects (16). Furthermore, a number of studies have found an improvement in both the depression and eating behavior with various antidepressant medications (17, 18).

The primary focus of the present study was to

Received June 26, 1986; revised Dec. 29, 1986; accepted April 2, 1987. From the Department of Psychiatry and Behavioral Medicine, University of South Florida College of Medicine. Address reprint requests to Dr. Powers, University of South Florida Psychiatry Center, 3515 East Fletcher, Tampa, FL 33613.

Supported in part by a grant from Anclote Psychiatric Hospital, Tarpon Springs, Fla.

Copyright © 1987 American Psychiatric Association.

document and illuminate some of the perceptual and cognitive abnormalities that have been noted in our clinical work with bulimic patients. This effort extends our knowledge of the perceptual and cognitive aspects of the syndrome as well as provides evidence that will encourage the inclusion of cognitive and perceptual factors in the assessment and treatment of bulimia.

METHOD

Subjects

The subjects consisted of two groups: bulimic and normal control subjects; all potential subjects completed the Eating Habits Questionnaire (J. Hudson, 1984, unpublished). The bulimic group included 55 women between the ages of 17 and 45. These subjects met operationalized DSM-III criteria for bulimia as defined by the Eating Habits Questionnaire. The criteria consisted of binge eating at least once a month, body weight within 15% of the upper or lower limit of the ideal weight for the subject's height according to the Metropolitan Life Insurance Company's height and weight tables (19), and no diagnosis of anorexia nervosa during the past year. The bulimic subjects were recruited from a number of sources. They came from a screening of undergraduate psychology students at the University of South Florida; patients at the medical center's eating disorders clinic and the university's counseling center; a bulimic anonymous group in Largo, Fla.; referrals by private practitioners; and responses to newspaper articles and radio and television spots about the study.

The control group consisted of 55 women between the ages of 18 and 40 who reported never having had an episode of binge eating. These subjects were required to meet the same height and weight standards as the bulimic group and to have not been diagnosed as having anorexia nervosa in the past year. The comparison subjects were recruited from undergraduate psychology courses and from the secretarial staff at the university's department of psychiatry.

All subjects were interviewed either by telephone or in person to clarify their responses to the Eating Habits Questionnaire. Only those who were clearly appropriate to one of the two groups were chosen to participate in the study. Undergraduate volunteers were given extra credit toward their psychology course grade. Other subjects were given an informative lecture on eating disorders. No significant differences were found between the bulimic and comparison groups on demographic variables of age, height, and weight.

Procedure

Five tests were administered to evaluate the perceptual aspect of body image. Three of these tests, the Image Marking Procedure (20), the Distorting Photograph Technique (21), and the Moving Caliper Technique

nique (22), have been used to assess body image distortions, primarily in anorexia nervosa patients. The Open Door Test has been described as a test of body image in obese patients (M. Simonson, cited in reference 23) but has not been studied with either anorexia nervosa or bulimic patients. The Kinesthetic Size Estimating Apparatus is a new instrument specifically designed to evaluate the tactile and kinesthetic dimensions of the perceptual aspect of body image. The procedures used for the first three tests have been described in detail elsewhere (20–22). The following is a description of the other two measures of the perceptual aspect of body image.

In the Open Door Test the subject stands at a door that opens toward her and has no doorknob on the opposite side. The subject is asked to open the door to the smallest width that she thinks would be necessary for her to just squeeze by sideways. When the subject has done this, a measure of the width to which the door is opened is recorded by the experimenter from a centimeter measuring scale located above the door. Then the subject is asked to stand in the doorway and the actual distance necessary for the subject to pass through sideways is measured.

The Kinesthetic Size Estimating Apparatus is used in the following way. The subject stands at arm's length from the instrument and is asked to move the calipers back and forth several times. The subject is then blindfolded and asked to estimate the width of her head, shoulders, waist, and hips at their widest point, first by moving the calipers in to the perceived widths and then out to the perceived widths; trials are counterbalanced to avoid a practice effect.

The attitudinal aspect of body image was evaluated with three measures—the Body Distortion Questionnaire (24), the Body Parts Satisfaction Questionnaire (25), and the Color-A-Person test (26). The first two tests have been used to evaluate disturbances in body image among anorexic but not bulimic subjects. The Color-A-Person test was designed by Wooley and Looke to use in therapy with bulimic patients but its usefulness in detecting attitudinal disturbances in body image has not been evaluated.

Fisher's Body Distortion Questionnaire (24) is an 82-item questionnaire designed to detect unusual subjective body attitudes and experiences such as the perception of body parts as extremely large or small, body openings as being blocked, and unusual sensations. The questions are answered "yes," "110," or "undecided," with the patient receiving a point for each answered "yes" or "undecided."

The Body Parts Satisfaction Questionnaire (25) is a self-report questionnaire in which the subject is asked to rate her satisfaction with various parts and features of her body. The 7-point satisfaction scale consists of alternatives ranging from "extremely dissatisfied" to "extremely satisfied."

The Color-A-Person test (26) employs an outline drawing of a female body. The subject is instructed to color in the body using five colored felt-tip markers

that represent a range of attitudes from highly positive to highly negative. The subject is allowed to choose the colors representing each evaluation.

A new measure called the Bulimia Cognitive Distortion Scale was administered to each subject; it has been described in detail elsewhere (27). It is a 25-item scale with five possible answers ranging from "strongly disagree" to "strongly agree." The scale was designed to assess possible cognitive distortions that may occur among bulimic patients. Questions include items that reflect all-or-none thinking (e.g., "If I'm not thin, I'm fat" and "If I overeat, I've blown it"). Some items tap thoughts about behavior believed to be relatively automatic (e.g., "Binging and purging control me, I don't control them" and "When I get angry, I must binge"). Other items reflect preoccupation with appearance (e.g., "If my hair isn't perfect, I'll look terrible"). The questionnaire has two subscales, the appearance subscale and the automatic behavior subscale.

To evaluate the relationship of depression to the syndrome of bulimia, the Beck Depression Inventory (13) was administered. This is a 21-item test with four possible answers for each question. It has high face validity and has been widely used for research in depression to evaluate the severity of the depression.

One-way analyses of variance were used to determine if there were significant differences between scores on each test, with normal versus bulimic subjects as the independent variable.

RESULTS

Characteristics of the bulimic group were consistent with previous reports of bulimic symptoms (DSM-III). The bulimic subjects overwhelmingly reported an intense fear of obesity (92.7%, N=51) and experienced a feeling that they were fat when they were clearly below normal weight (84.0%, N=46). They also evidenced a marked history of amenorrhea (48.0%, N=26), as well as a history of having sought help for their binge eating (56.3%, N=31). Many bulimic subjects in the study reported current binge frequency of at least several times a week (54.2%, N=30) and had experienced their most recent binge eating within the last week (77.8%, N=43). During a binge, they consumed high-calorie food (92.7%, N=51) and ate in an inconspicuous manner (94.4%, N=52), and they had weight fluctuations of more than 10 lb. (72.2%, N=40).

The bulimic subjects in our sample used a variety of measures to counteract the effects of binge eating, including fasting (90.7%, N=50), self-induced vomiting (85.2%, N=47), excessive exercise (75.5%, N=42), diet pills (75.5%), laxatives (56.3%, N=31), and diuretics (32.1%, N=18).

On the perceptual measures of body image, bulimic subjects overestimated their size on all measures of overall body size and body parts (except face), but the most significant differences had certain trends (see table 1). Bulimic subjects very significantly overestimated body size on the Distorting Photograph Technique (both when the slide was distorted too wide, i.e., "fat," or distorted too narrow, i.e., "thin"). In the estimates of various body widths, the most significant overestimates were of hips and waist (especially with the Moving Caliper Technique and the Kinesthetic Size Estimating Apparatus), although significant differences were also found with the Image Marking Procedure. The perceptual measures of face width were statistically no different between bulimic and normal control subjects on the Image Marking Procedure, the Moving Caliper Technique, and the Kinesthetic Size Estimating Apparatus, except for Face In on the last test.

The attitudinal measures of body image consistently showed statistically very significant differences between the two groups (see table 1). Bulimic subjects evidenced very negative, disparaging attitudes toward their appearances on the Body Distortion Questionnaire, the Body Parts Satisfaction Questionnaire, and the Color-A-Person test.

On the test of cognition, the Bulimia Cognitive Distortion Scale, bulimic subjects scored significantly higher on the total score and both subscales (appearance and automatic behavior) than did normal subjects (see table 2). The bulimic subjects also had significantly higher scores on the Beck Depression Inventory.

DISCUSSION

Although errors in estimates of waist and hip widths were significantly different between the two groups on three measures of body parts (the Image Marking Procedure, the Moving Caliper Technique, and the Kinesthetic Size Estimating Apparatus), the significance levels between groups were greater with the Moving Caliper Technique and were the greatest with the Kinesthetic Size Estimating Apparatus. It is hypothesized that these two devices, especially the Kinesthetic Size Estimating Apparatus, actually rely more on touch and kinesthesia than the Image Marking Procedure and might therefore be expected to reveal greater differences between bulimic and normal subjects. With the Kinesthetic Size Estimating Apparatus, which the subjects adjust with their eyes closed, it is interesting that both normal and bulimic subjects overestimated widths of waist and hips, especially when the calipers were moved in rather than out from the body's midline to estimate width. This finding may mean that anyone is more likely to be accurate with the kinesthetic cue of starting an estimate at one's midline. Another possible interpretation is that normal women in our culture may overestimate waist and hip widths, especially with measures that rely on tactile or kinesthetic senses. On all three perceptual measures of estimates of body part widths, bulimic and control subjects did not differ significantly in estimates of face width, except for Face In on the Kinesthetic Size Estimating Apparatus. Size and shape of head may not

TABLE 1. Perceptual and Attitudinal Ratings of Body Image for 55 Bulimic Subjects and 55 Normal Subjects

	Bulimic	Subjects	Normal	Subjects	F	
Measure	Mean	SD	Mean	SD	$(df=1, 108)^a$	
Perceptual						
Image Marking Procedure ^b						
Face	0.96	3.75	0.44	3.02	0.66	
Shoulders	-3.36	7.82	-7.00	5.52	7.95°	
Waist	1.09	5.76	-1.00	4.69	4.36 ^d	
Hips	3.93	8.59	0.64	4.91	6.08°	
Distorting Photograph Technique ^c						
25% too thin	-0.43	9.42	-7.09	5.84	17.27 ^f	
25% too fat	14.39	9.43	5.94	4.71	32.93 ^f	
Moving Caliper Technique ^b					3-11-3	
Face In	3.53	4.19	2.18	3.96	2.99	
Face Out	0.24	3.17	-0.02	3.08	0.18	
Shoulder In	-2.04	5.80	-5.91	5.11	13.82 ^g	
Shoulder Out	-6.42	4.62	-9.49	4.95	11.32 ^g	
Waist In	4.95	3.88	2.24	4.31	12.01 ^g	
Waist Out	1.93	4.01	-0.40	4.97	7.31 ^c	
Hips In	3.22	5.88	-0.90	5.32	14.91 ^g	
Hips Out	0.49	5.17	-2.87	5.32	11.31 ^g	
Open Door Test ^b	5.50	7.84	1.51	4.92	7.55°	
Kinesthetic Size Estimating Apparatus ^b						
Face In	9.84	6.85	7.87	4.46	5.74 ^d	
Face Out	2.2	3.65	2.0	4.59	1.48	
Shoulder In	8.35	9.85	2.22	6.59	13.45 ^g	
Shoulder Out	0.49	7.99	-3.65	7.39	7.20 ^c	
Waist In	9.56	6.77	5.51	7.19	11.85°	
Waist Out	3.80	4.93	0.16	5.35	18.70 ^f	
Hips In	13.64	9.26	7.87	7.04	14.54 ^g	
Hips Out	7.24	9.25	0.98	5.86	23.00 ^t	
Attitudinal					_55	
Body Distortion Questionnaire	19.78	13.85	4.29	5.24	55.97 ^f	
Body Parts Satisfaction Questionnaire	82.62	15.30	107.89	12.19	83.29 ^f	
Color-A-Person	53.40	11.72	69.96	9.89	64.16 ^t	

^adf=1, 106 for Distorting Photograph Technique and Open Door Test.

TABLE 2. Ratings of Cognition and Depression for 55 Bulimic Subjects and 55 Normal Subjects

		imic jects	Noi Sub	F (df=	
Measure	Mean	SD	Mean	SD	1, 108)
Bulimia Cognitive Distortion Scale					-
Total score Appearance	89.89	17.29	45.93	10.26	262.92ª
subscale Automatic	30.82	7.32	18.76	4.89	103.15 ^a
behavior subscale Beck Depression	59.07	11.39	27.16	6.54	324.70 ^a
Inventory	19.64	11.12	4.42	3.72	92.74 ^a

 $^{^{}a}p < .0001.$

be emotionally conflicted perceptions; this gives credence to the validity of these tests.

The fact that bulimic and normal subjects differed significantly on the measures of body image (except for most face width estimates), cognition, and depression suggests that these factors may all be part of the same process.

The following model is proposed to account for the findings in this study. Cultural shifts and changes in role expectations may result in a larger pool of women with obsessive-compulsive traits (a common feature of which is all-or-none thinking). This, coupled with the still prevalent notion that a woman's appearance is paramount and that a thin size and shape are desirable, may be the necessary cultural ingredients for bulimia. Bulimic women also appear to be biologically vulnerable to depression. Johnson et al. (28) reported that bulimic women are more likely to come from families with very high expectations and low structure; these factors may increase their vulnerability to cognitive distortions. For various reasons, the girl or woman decides to diet. In the context of dieting and subnormal nutrition, certain cognitive distortions about food, appearance, and behavior may be accepted without question (for example, the belief "If I'm not thin, I'm

^bReported as difference in scores (i.e., estimate minus actual width).

^cp<.01. ^dp<.05.

Reported as percentage distorted from actual size.

p<.0001.

 $^{^{}g}_{p} < .001$.

fat"). Many girls and women with bulimia may have relatively quick weight changes, with many patients varying 20 to 40 pounds within weeks or months; these weight changes, coupled with malnutrition, cognitive disturbances, and depression, may result in a diffuse and inaccurate awareness of body size and shape. It is known that when a change in body size or shape occurs, such as after amputation (29) or during pregnancy (30), time is required before the mental image of the body changes. Recurrent changes in size and shape, especially if they seem to be the consequence of "automatic behavior," may be particularly difficult to assimilate into a coherent body image, and the bulimic patient may develop symptoms of disturbances in both the perceptual and attitudinal aspects of body image.

REFERENCES

- 1. Pyle RL, Mitchell JR, Eckert ED, et al: The incidence of bulimia in freshman college students. Int J Eating Disorders 1983; 2:75-
- 2. Halmi KA, Falk JR, Schwartz E: Binge-eating and vomiting: a survey of a college population. Psychol Med 1981; 11:697-706
- 3. Langworthy OR: Development of behaviour patterns and myelinization of the nervous system in the human fetus and infant. Contrib Embryol 1933; 24:1-57
- 4. White W, Boskind-White M: An experimental-behavioral approach to the treatment of bulimarexia. Psychotherapy 1981; 18:501-507
- 5. Russell GFM, Campbell PG, Slade PG: Experimental studies on the nature of the psychological disorder in anorexia nervosa. Psychoneuroendocrinology 1975; 1:45-56 6. Pierloot RA, Houben ME: Estimation of body dimensions in
- anorexia nervosa. Psychol Med 1978; 8:317-324
- 7. Crisp AH, Kolucy RS: Aspects of the perceptual disorder in anorexia nervosa. Br J Med Psychol 1974; 47:349-361
- 8. Garfinkel P: Some recent observations on the pathogenesis of anorexia nervosa. Can J Psychiatry 1981; 26:218-223
- Garner D, Garfinkel P, Stancear H, et al: Body image disturbance in anorexia nervosa and obesity. Psychosom Med 1976; 38:327-336
- 10. Button E, Franscella F, Slade P: A reappraisal of body perception disturbance in anorexia nervosa. Psychol Med 1977; 7: 235–243
- 11. Keys A, Brozek J, Henschel A, et al: The Biology of Human Starvation. Minneapolis, University of Minnesota Press, 1950
- 12. Garner D, Bemis K: A cognitive-behavioral approach to ano-

- rexia nervosa. Cognitive Therapy and Research 1982; 6:123-
- 13. Beck AT: Depression: Clinical, Experimental and Theoretical Aspects. New York, Harper & Row, 1967
- 14. Fernandez RC: Disturbances in cognition: implications for treatment, in Current Treatment of Anorexia Nervosa and Bulimia. Edited by Powers PS, Fernandez RC. New York, Karger, 1984
- 15. Walsh BT, Roose SP, Glassman AH, et al: Eating disorders and depression, in Syllabus and Scientific Proceedings in Summary Form, 136th Annual Meeting of the American Psychiatric Association. Washington, DC, APA, 1983
- 16. Hudson JI, Laffer PS, Pope HG Jr: Bulimia related to affective disorder by family history and response to the dexamethasone suppression test. Am J Psychiatry 1982; 139:685-687
- 17. Pope H Jr, Hudson J, Jonas J: Antidepressant treatment of bulimia: preliminary experience and practical recommendations. J Clin Psychopharmacol 1983; 2:274-281
- 18. Pope HG Jr, Hudson JI, Jonas JM, et al: Bulimia treated with imipramine: a placebo-controlled, double-blind study. Am J Psychiatry 1983; 140:554-558
- 19. Metropolitan Life Insurance Company: 1983 Metropolitan height and weight tables. Stat Bull Metrop Insur Co 1983; 64:
- 20. Askevold F: Measuring body image. Psychother Psychosom 1975; 26:71–77
- 21. Glucksman M, Hirsch J: The response of obese patients to weight reduction, III: the perception of body size. Psychosom Med 1969; 31:1–17
- 22. Slade P, Russell G: Awareness of body dimensions in anorexia nervosa. Psychol Med 1973; 3:188-199
- 23. Powers PS: Obesity: The Regulation of Weight. Baltimore, Williams & Wilkins, 1980, p 171
- 24. Fisher S: Body in Fantasy and Behavior. New York, Appleton-Century-Crofts, 1970
- 25. Berscheid E, Walster E, Bohrnstedt G: The happy American body: a survey report. Psychology Today, Nov 1973, pp 119-
- 26. Wooley S, Looke A: Intensive treatment of bulimia and body image disturbances, in Handbook of Eating Disorders: Physiology, Psychology and Treatment. Edited by Brownell K, Foreyt J. New York, Basic Books, 1986
- 27. Schulman RG, Kinder BN, Powers PS, et al: The development of a scale to measure cognitive distortions in bulimia. J Pers Assess 1986; 50:630–639
- 28. Johnson CL, Lewis C, Hagman J: The syndrome of bulimia: review and synthesis. Psychiatr Clin North Am 1984; 7:247-
- 29. Paré A: The Workes of That Famous Chirurgion, Ambrose Parey, Translated Out of the Latin and Compared With the French by T Johnson. London, Cotes, 1649
- 30. Slade P: Awareness of body dimensions during pregnancy: an analogue study. Psychol Med 1977; 7:245-252

The Evolving Subspecialization of Psychiatry: Implications for the Profession

Joel Yager, M.D., and Donald G. Langsley, M.D.

Psychiatry is likely to evolve into a number of subspecialty areas, paralleling developments in other medical specialties. These changes are impelled both from within psychiatry, where the rapid increase in knowledge and skills makes mastery of the entire field by any one practitioner less possible, and from without, related to new expectations for psychiatric services from referral sources and patients, increasing competition by other physicians and nonphysician mental health care providers, and shifting reimbursement patterns. The authors discuss the advantages and disadvantages of subspecialization as well as implications for psychiatric practitioners and training programs.

(Am J Psychiatry 1987; 144:1461-1465)

O ver the past few years, questions have been raised regarding the potential evolution of psychiatry into subspecialties, paralleling developments that have occurred in internal medicine, pediatrics, surgery, and other core medical specialties. Forces both within and external to psychiatry appear to be pushing the field inexorably in this direction. In this paper we will review these forces, attempt to envision the probable course of the evolution, and discuss both the advantages and problems that can be anticipated. Finally, we

suggest ways in which practitioners and training programs can cope with these inevitable developments.

For a perspective regarding psychiatry, we must first consider analogous trends in the rest of medicine. The movement toward subspecialization in all medical specialties has occurred in response to the explosion of medical knowledge, the awareness on the part of specialists that no one can hope to master all the knowledge and skills in an entire specialty, and a desire for the highest possible levels of quality care. Subspecialties have emerged and are recognized when there is a body of scientific knowledge and skill distinct from or more detailed than that which exists in other areas, when a number of physicians have started to limit their practices to these problems and/or skills, when national societies develop that focus on the subspecialty area, and when divisions in medical school and hospital departments are organized around clinical care and education in these areas, with the development of fellowships and de facto subspecialists.

The differentiation of subspecialties from the parent specialty has often stimulated dissent and resentment among those who are not subspecialists and has sometimes resulted in backlash. For example, the glorification of primary care specialists during the 1970s, particularly those in family medicine, general internal medicine, and primary care pediatrics, reflected national concerns regarding the need for old-fashioned generalists who knew how to talk to patients and provide a good bedside manner instead of fragmented technical medical care. Nevertheless, subspecialties have proliferated. The American Board of Medical Specialties now recognizes more than 80 different types of specialist and subspecialist credentials. There are 12 subspecialties in internal medicine, eight in pediatrics, four in obstetrics and gynecology, and nine in pathology. Surgery split into a number of separate specialties, several of which now have their own

Copyright © 1987 American Psychiatric Association.

Received Nov. 3, 1986; revised March 30 and April 13, 1987; accepted April 28, 1987. From the Department of Psychiatry and Biobehavioral Sciences, School of Medicine, University of California, Los Angeles (UCLA); the UCLA Neuropsychiatric Institute and the West Los Angeles VA Medical Center (Brentwood Division); and the American Board of Medical Specialties and the Department of Psychiatry and Behavioral Sciences, Northwestern University School of Medicine, Evanston, Ill. Address reprint requests to Dr. Yager, UCLA NPI, 760 Westwood Plaza, Los Angeles, CA 90024.

subspecialties. By way of contrast, psychiatry currently has only one subspecialty certificate, child psychiatry.

Although medical students have been encouraged to pursue primary care careers, it is evident that the students themselves still prefer to take subspecialty training. Over 60% of the graduates of internal medicine residencies choose to take subspecialty fellowships after finishing their basic programs. They may be responding to several irresistible forces: a sense that the demands of current primary care medical practice on practitioners are overwhelming and the desire to achieve a greater feeling of competence in more circumscribed areas; the increased prestige that seems inevitably to accompany subspecialist status; and an awareness that our increasingly sophisticated patients—the health care consumers—desire the highest level of technical competence when they are dealing with serious medical problems. In certain urban areas, many patients with self-diagnosed problems already seek out subspecialists on their own. Medical students may also realize that many contemporary subspecialists do not limit their practices to the subspecialty. In internal medicine, for example, certified subspecialists still do a considerable amount of primary care practice (1).

GENERAL PSYCHIATRY

Although the impetus toward increasing subspecialization in psychiatry has started, the current practice is still largely that of generalists. Langsley and Hollender (2) described the skills required of general psychiatrists and validated their list by using the opinions of a wide variety of academic and practicing psychiatrists. The core skills of general psychiatry include diagnosing psychiatric disorders and providing individual psychodynamic psychotherapy and pharmacotherapy. Several studies of practice patterns (3, 4) have affirmed their primacy. Beyond these skills, however, considerable differences of opinion exist as to which others, such as administering ECT or conducting behavior therapy, family therapy, or group therapy, should be considered generalist or subspecialty skills. Among the skills assessed by Langsley and Hollender are many shared by at least some nonphysician mental health providers and by nonpsychiatrist physicians, particularly those trained in contemporary family practice and general internal medicine programs.

Certainly, psychotherapy alone is not now the exclusive domain of psychiatrists—if it ever was; many others are willing and able to do it with reasonable competence. Primary care physicians desire to be competent in the psychopharmacology of tranquilizers and tricyclic antidepressants, and they should be, given the large numbers of patients they see for whom such interventions may be appropriate. Most primary care physicians still consider lithium, monoamine oxidase inhibitors, neuroleptics, and anticonvulsants used for psychiatric purposes to be in the psychiatrist's domain.

FORCES FAVORING SUBSPECIALIZATION IN PSYCHIATRY

Psychiatry has gone through a number of well-known historical phases. Starting as a hospital-based specialty in public and private psychiatric hospitals that were kept separate from general medical-surgical hospitals, psychiatry shifted to a predominantly office-based psychotherapeutic practice after World War II. In the 1960s community psychiatry saw the growth of short-term interventions; psychiatrists served as team leaders and consultants to growing ranks of nonpsychiatrist mental health workers. In the 1970s and 1980s psychiatry has remedicalized, with a renewed emphasis on psychiatric practice in the general hospital setting, biological treatments, and closer affiliations with other medical specialties.

Psychiatry has historically managed to contain within its broad boundaries practitioners of various psychological, social, and biological bents and now seems ready to develop truly differentiated subgroups. Today, particularly in large cities, psychiatrists often limit their practices even without formal subspecialty credentials. Within psychiatry, some subspecialties have emerged naturalistically. Some have evolved around specific age groups (e.g., children, adolescents, college students, the elderly), specific disorders (e.g., affective disorders, alcohol and drug abuse, eating disorders, schizophrenia), specific techniques (e.g., psychoanalysis, ECT, psychopharmacology, family therapy, group therapy), and work contexts (e.g., forensic, administrative, industrial). With increases in knowledge and techniques, we should expect new areas to continue to emerge as they have in other medical specialties. For example, brain imaging and computer-mediated therapies are but two areas around which future subspecialization might develop.

Rapid and enormous increases in knowledge, particularly but by no means exclusively in the biological sciences, assure not only that it will be increasingly difficult for any one psychiatrist to learn all the basics but also virtually impossible to keep up in every area. When little was known, psychiatrists could practice with broad but limited knowledge; after all, the knowledge that existed did not offer much practical help. But studies are showing increasingly how specific biological and psychotherapeutic techniques differ in effectiveness. We can expect increasing demands from patients and the health care professions for precise expertise of the sort that no one psychiatrist could universally master.

The cleavage lines of emerging psychiatric subspecialties are being drawn naturalistically by affiliations of practitioners who converge around given issues. In a little over the past decade alone, large numbers of new psychiatric subspecialty journals have appeared. To illustrate, such journals as Drug and Alcohol Dependence, General Hospital Psychiatry, Journal of Affective Disorders, Journal of Clinical Psychopharmacology, Journal of Psychiatry and Law, International

Journal of Eating Disorders, International Journal of Geriatric Psychiatry, and many others attest to the vigor and demand for communication in these areas. A number of new subspecialty societies have also been formed, and their national and regional meetings have attained increasingly significant stature. Even in the absence of subspecialty certification, increasing numbers of subspecialty fellowships are being offered in geriatrics, forensics, administration, psychopharmacology, eating disorders, alcohol and substance abuse, consultation-liaison, psychotherapy, and emergency psychiatry, indicating the presence of subspecialtyoriented service delivery patterns and demands for more intensive subspecialty training. Within academic centers and urban areas in particular, intraspecialty consultations and cross-referrals among psychiatrists are increasingly commonplace, and large numbers of medical students now applying to psychiatric residency programs clearly indicate that they intend to subspecialize and they identify diverse areas of interest.

The forces within psychiatry favoring subspecialization are paralleled and strongly influenced by strong currents in the surrounding health professions. Requests for consultation from other physicians are asking for increasingly specific subspecialty skills; for example, someone who "specializes in psychopharmacology for geriatric patients" or "an expert in cocaine abuse and families." Coming from highly subspecialized fields themselves, other physicians expect the same degree of skill differentiation in psychiatry. Several other medical specialties are starting to develop their own subspecialty areas of special qualification that will compete for patients. Recent developments include the organization of "addictionologists," who have formed a specialty board. There has also been discussion among family physicians regarding the development of geriatrics. Without corresponding formal subspecialties, psychiatry could be at a major competitive disadvantage.

The many major changes throughout the health care system in medical service reimbursement patterns suggest that future psychiatrists will increasingly be asked to serve as consultants rather than as general practitioners of mental health. These system-wide changes include the increasing enrollment of patients in managed care systems, further vertical control of medical care by major private corporations, and increasing use of "gatekeeper" models of care, all of which are likely to restrict the access of patients to psychiatrists as well as to other specialists far more than is currently the case (5). We can anticipate that those responsible for keeping health care costs down will use cheaper, nonpsychiatric mental health professionals as much as possible. Psychiatrists will be used as consultants to handle the complicated conditions that others cannot manage. The rapidly growing numbers of nonphysician therapists will also spur the development of subspecialization among psychiatrists as clearly identifiable and unique areas of distinct expertise become

the salient commodities in increasingly competitive markets.

PROBABLE PATTERNS OF SUBSPECIALTY EVOLUTION

The predominant push for the formation of subspecialties is likely to come not from mainstream practitioners but from the peripheries of the field; de facto subspecialization already exists both in academic centers and in specialty unit practice settings. Most resistance to the concept of subspecialization can be expected from those who most highly value their dentities and roles as generalists, those who may fear that portions of their practices would be usurped by younger or more highly trained subspecialists. However, these psychiatrists, too, will realize some advantages to emerging subspecialization, and many will consider educating themselves further in a par icular area so as to have a subspecialty.

In addition to child psychiatry, several other areas are emerging as likely subspecialties. Not all will ultimately achieve formal subspecialty status. Some may remain informal. Others may evolve only to the point where a certificate of "added qualifications" is awarded by an already established board. For the present, the following are the major areas of potential subspecialty interest.

1. Geriatric psychiatry: although the current number of highly qualified and formally trained subspecialists is small, the presence of national societies, academic fellowships, specialty hospital units and clinics, several journals, national demand in the form of an aging population, and heavy competition from primary care physicians and neurologists will impel the rapid development of a formal subspecialty.

2. Forensic psychiatry: with recognized fellowships, journals, societies, and its own board certification process outside of the American Board of Psychiatry and Neurology, this field could conceivably become a formal subspecialty of the American Board of Psychiatry and Neurology. Within clinical psychology, forensic psychology is an emerging subspecialty area.

- 3. Consultation-liaison psychiatry: fellowship training, specialty societies, and several journals exist in this area. Whether a knowledge and procedure base separate from geriatrics and clinical psychopharmacology exists and will warrant true subspecialty status remains to be seen.
- 4. Clinical psychopharmacology: fellowship training, journals, and societies exist. In practice there are several well-recognized de facto subspecialty oractitioners who consult with other psychiatrists on difficult cases and who in some instances comanage patients with psychiatrists who have limited their practices to psychotherapy or psychoanalysis.
- 5. Administrative psychiatry: although certif cation in this field does not take place through the American Board of Psychiatry and Neurology, APA already

recognizes and certifies administrative psychiatry. There are a few training programs, societies, and journals and a great deal of interest in having available psychiatrists who are well trained in administration.

6. Alcoholism and drug abuse: impelled largely by the political and fiscal implications of rapidly organizing addictionologists, many of whom are nonpsychiatric physicians who are recovered substance abusers or whose expertise is based almost entirely on personal experience, psychiatrists involved in these areas are forming their own credentialed society. National meetings, journals, and fellowships are available.

7. Psychoanalysis: a de facto subspecialty that is not certified by the American Board process, psychoanalysis developed credentialing systems through the American Psychoanalytic Association. It is possible that medical psychotherapy may evolve as a subspecialty in view of the lack of controls or standards

for those who practice psychotherapy.

8. Family, group, and individual therapy: similarly, family therapists, group therapists, and even individual psychotherapists are developing separate identities and may strive for some certification and subspecialization status. The appearance of advertisements inviting membership in the "American Board of Medical Psychotherapy," an organization in which psychiatrists are a distinct minority, attests to the growing interest among nonphysician psychotherapists to attain the legitimacy that seems to be offered by a nationally recognized certification process.

Other developing subspecialties may include adolescent psychiatry (as distinct from child psychiatry), eating disorders, sleep disorders, affective disorders, schizophrenia, behavioral neurology, ECT and other somatic procedures, and emergency psychiatry. No doubt even additional areas will emerge.

ADVANTAGES, DISADVANTAGES, AND ADAPTATIONS

In our view subspecialization not only is inevitable but also holds several advantages for psychiatrists and patients alike. First and foremost, subspecialization will help elevate the level of psychiatric care received by many patients. Even if patients continue to be treated largely by generalist psychiatrists, an emerging subspecialization will increase the tendency for generalists to obtain consultation. This consultation process will better assure quality care as well as ongoing education of the generalists. The tendency among some psychiatrists to see themselves as qualified to treat any type of psychiatric problem with an eclectic blend of generic psychotherapy and nonspecific psychopharmacology may be counteracted by rising expectations that subspecialty consultation should be the norm in community practice.

Second, as already mentioned, in the inevitably increasingly competitive health care market, subspecialization should increase the value of the psychiatrist

as compared with providers who lack such in-depth expertise.

Third, as subspecialists increase in number relative to generalists, the quality of most psychiatric residency training programs may improve, since even those training as generalist psychiatrists should be trained in subspecialty areas by qualified subspecialists, as is currently the practice in internal medicine and pediatrics.

For all these benefits, however, several inescapable problems can be envisioned. Both narcissistic as well as economic threats can be anticipated. First, many psychiatrists derive their deepest professional gratifications from the practice of general psychiatry, treating a wide variety of patients continuously over time in psychotherapy combined as needed with pharmacotherapy, family therapy, and other interventions. For them, subspecialization may raise the specter of compartmentalized and fragmented care. But in our view, if economic circumstances permit, psychiatric subspecialists should still be able to obtain these gratifications and, if they so choose, spend a considerable portion of their time practicing general psychiatry. This pattern already exists in psychiatry, since child psychiatrists are known to spend much of their professional time seeing adult patients.

Second, some are concerned that generalists' practice privileges may be limited in comparison with those of subspecialists. Even without formal subspecialties this is already the case in many areas. Many hospital credentials and privileges committees no longer give psychiatrists blanket privileges for all procedures related to psychiatry but ask the psychiatrists and their training program directors to enumerate the specific skills they possess that are based on specifically supervised training experiences.

Third, there is the possibility that insurance companies may differentially reimburse subspecialists and generalists for the same procedures. This already occurs in some primary care specialties. It also occurs in many communities where consultation fees commanded by recognized experts are often higher than those charged for similar consultations by generalists. Most academic centers charge differentially for various psychiatric procedures, not just for the amount of professional time they take.

Fourth, generalists may feel professionally diminished by not having the extra credentials and status of subspecialists. In response to these concerns, we should point out that for the first few years of a new subspecialty certificate, practitioners can be "grandfathered" on the basis of clinical experience in lieu of a formalized fellowship if they meet the established experience requirements and pass the examination given by the board. No doubt, many psychiatrists who consider themselves generalists may take this opportunity to develop a subspecialty area of expertise in order

Fifth, psychiatry may be in danger of splitting its identity among the smaller subspecialties so that alle-

not to feel left behind.

giance to the field as a whole, e.g., as represented by membership and participation in APA rather than primarily in subspecialty societies, may be threatened. But, by analogy, the American Medical Association remains strong and is still the most potent voice in organized medicine even though the development of different medical specialty societies reduced specialist involvement in the organization. Given the important work that APA conducts on a national scale with respect to public education and political and economic issues, its members should continue to provide substantial support. It is unlikely that any psychiatric subspecialty group would be able to muster sufficient size, capital, or energy to replace APA in carrying out this business. In addition, APA may need to find ways to develop into a helpful umbrella organization for psychiatry's subspecialty societies.

IMPLICATIONS FOR TRAINING

We believe that any subspecialty training in psychiatry can be modeled on the relation of child psychiatry to general psychiatry. First, subspecialty training should be built on a firm grounding in general psychiatry, as child psychiatry training is built on general psychiatry. Second, subspecialty aspects of general training should be taught by qualified subspecialists. Current accreditation guidelines used by the Residency Review Committee require that child psychiatry training for general psychiatrists must be under the direction of trained child psychiatrists. The Residency Review Committee should be responsible for assuring that such subspecialty-qualified faculty are available; in the absence of such faculty the accreditation of the training program could be restricted or jeopardized.

Third, subspecialty training might begin in the fourth or fifth postgraduate year of residency, following 2–3 years of generalist training (depending on local funding). Even for those residents who do not take formal fellowships, some degree of subspecialization should be possible within the constraints of current training program electives. A continuum of subspecialty elective rotations can be envisioned that ranges from a month or more, through well-developed subspecialty tracks (essentially areas of concentration during the entire senior year), to formal postgraduate subspecialty fellowships.

Payment for additional training as a subspecialist presents a problem. Traditionally, training funds have come primarily from hospital-derived income. The extent to which such funding will be available in the future is unknown, but undoubtedly some mechanisms to pay for continuing medical training will be worked out. Money for subspecialty training will come from those most interested in seeing specific areas develop; specialty hospital units and clinicians may generate funds for alcoholism and drug abuse, clinical psychopharmacology, and consultation-liaison fellowships, as they currently do. Contracts with court systems may pay for forensic fellowships. The federal government may continue to maintain sufficient interest to fund certain public priority areas such as geriatric psychiatry and minority psychiatry. We can expect fellowship funding to closely follow these marketplace demands. Subspecialization may also inject vigor into university extension divisions and foster the development of organized sequences of education and training in subspecialty areas. Such programs may lead to advanced degrees or formal university certificates.

CONCLUSIONS

We have described what we believe to be inevitable trends in the development of subspecialty areas in psychiatry. In our view, not only is increased subspecialization likely but it carries with it the possibility of upgrading the quality of psychiatric practice and education. Several problems are predictable, many of which will derive as much from the changing scene in medical economics as from subspecialization. With these changes in mind, subspecialization may render psychiatry even more competitive in relation to other mental health care providers. We do not envision the disappearance of basic satisfactions of general psychiatric practice; rather, superimposed on the fundamental skills of the generalist psychiatrist, subspecialty skills should enable practitioners to be even more helpful to a variety of patients and to our associated professions.

REFERENCES

- Aiken LH, Lewis CE, Craig J, et al: The contributions of specialists to the delivery of primary care: a new perspective. N Engl J Med 1979; 300:1363–1370
- 2. Langsley DG, Hollender MH: The definition of a psychiatrist. Am J Psychiatry 1982; 139:81–85
- 3. Marmor J: Psychiatrists and Their Patients: A National Survey of Private Office Practice. Washington, DC, Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, 1975
- Yager J, Pasnau RO, Lipschultz S: Professional characteristics of psychiatric residents trained at the UCLA Neurops chatric Institute 1956–1975. J Psychiatr Education 1979; 3:7.2–85
- Tarlov AR: The increasing supply of physicians, the changing structure of the health-services system and the future practice of medicine. N Engl J Med 1983; 308:1235–1244

A Comparative Trial of Pharmacologic Strategies in Schizophrenia

William T. Carpenter, Jr., M.D., Douglas W. Heinrichs, M.D., and Thomas E. Hanlon, Ph.D.

An open comparative trial was conducted involving 42 schizophrenic outpatients randomly assigned to one of two methods of drug administration: continuous medication (N=21) and targeted medication plus psychosocial intervention (N=21). The results, which suggest an extensive similarity with respect to outcome for the two treatments over a 2-year period, argue for the continuation of research on the relative effectiveness of the targeted drug approach, particularly in cases judged suitable for drug reduction strategies.

(Am J Psychiatry 1987; 144:1466-1470)

Current thinking favors the implementation of a number of interpersonal strategies designed to address practical problems encountered by the schizophrenic patient and his or her family. Briefly, those strategies receiving recent emphasis include 1) individual treatment aimed at establishing a close interpersonal bond between the schizophrenic patient and the clinician to gather information, offer support and encouragement, identify the beginning of relapse, and otherwise help the patient deal with the complex social demands that are so overwhelming for individuals with this illness (1, 2); 2) an educational approach

intended to inform patient and family about the nature of schizophrenia and the various treatments available and to form a link for coordinating joint therapeutic efforts (2, 3); and 3) approaches emphasizing behavioral techniques aimed at reducing stress and environmental stimulation and at enhancing patient and familial coping behaviors (4–6).

In an open trial, Herz et al. (7) demonstrated the feasibility of targeted pharmacotherapy in 14 stable schizophrenic outpatients. The results of their study, along with the longitudinal observations of two experienced European clinicians, Bleuler (8) and Ciompi (9), suggest the feasibility of treatment strategies not dependent on the continuous administration of antipsychotic medication.

In this paper, we report on an open comparative trial involving the treatment of schizophrenic outpatients with two methods of drug administration, one of which incorporated features of the already mentioned innovative strategies. Our expectation was that targeted drug plus psychosocial intervention would be comparable to a standard continuous medication approach in terms of maintenance effectiveness and superior in terms of longer-term outcome on selected criteria, including deficit symptoms. The trial represents the baseline phase of a research program concerned with the utility of intermittent and reduced medication strategies in the treatment of schizophrenic outpatients. Because of the preparatory nature and limited scope of the trial, analyses of the findings were undertaken largely for exploratory and descriptive purposes.

METHOD

Patients between 18 and 50 years old were accepted for evaluation and treatment after discharge from a

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received June 16, 1986; revised March 4 and June 16, 1987; accepted July 7, 1987. From the Maryland Psychiatric Research Center, Department of Psychiatry, University of Maryland School of Medicine. Address reprint requests to Dr. Carpenter, Maryland Psychiatric Research Center, P.O. Box 21247, Baltimore, MD 21228.

Supported in part by NIMH grant MH-35996.

The authors thank Ann Summerfelt and the staff and patients of the Walnut Street Clinic for their contributions.

Copyright © 1987 American Psychiatric Association.

psychiatric hospital unit or, occasionally, after referral from a community clinic or practicing psychiatrist. All had had a recent psychotic episode and were in some intermediate stage of recovery. Preadmittance screening was undertaken to assure a patient cohort with a clinical diagnosis of schizophrenia. In addition, patients were required to meet Research Diagnostic Criteria (RDC) (10) for schizophrenia or schizoaffective disorder, mainly schizophrenic. Exclusion criteria included evidence of an organic brain disorder, recent evidence of alcoholism or clinically significant drug abuse, poor physical health, or a major medical illness requiring treatment. After initial selection, the patient and either a family member or a significant other were interviewed to assess the need for further screening, to explain the study, and to obtain informed consent. Patients entered the study after formally indicating their agreement to participate by signing a written consent form meeting both NIMH and local institutional review board regulations.

Baseline and Treatment Procedure

The patients' initial clinic visits were devoted to evaluation and stabilization, which generally involved the administration of neuroleptic medication for periods lasting 4–8 weeks. When a patient was clinically stable, medication was withdrawn for a 4-week period, during which baseline assessments were completed. Neuroleptic medication was administered during this period only when there was an immediate need for symptom control. At the completion of the drugfree trial, the patients were randomly assigned, using a stratification process involving sex, age, and prognostic status, to a 2-year experimental treatment course. Patients who failed to complete the drug-free period after two attempts were admitted to the experimental phase while taking medication.

During the study, patients who decompensated and required inpatient treatment were admitted to their local hospital until they were again candidates for outpatient treatment. At discharge, they continued in the study, provided they had been hospitalized for fewer than 6 months. Clinic staff maintained contact with the patients during their hospital stays to facilitate return to the treatment evaluation program. Periods of hospitalization that occurred within the 2-year experimental treatment phase were considered as time in the study.

Assessment Measures

The case history and prognostic instruments completed during the stabilization (baseline) period included the Overall Brief Psychiatric History (11) and the Prognostic Scale (12). Criterion instruments included the Brief Psychiatric Rating Scale (BPRS), the Global Assessment Scale (GAS) (13), the Level of Functioning Scale (14), and the Quality of Life Scale (15). Criterion instruments were completed at 6-

month intervals by an evaluator who was independent of the treatment team and whose sole function luring the experimental treatment phase was to make independent assessments of outcome. Interrater agreement on major criterion measures between the independent rater and the other staff members tended to be high, with intraclass correlations for total and major factor scores usually over .70 and generally within the mid-.80 to mid-.90 range.

Experimental Treatments

The continuous medication approach was equivalent to the standard maintenance treatment of wed to recently hospitalized schizophrenic patients b most outpatient aftercare services. Treatment was disigned to provide continuous pharmacotherapy; minimum daily chlorpromazine-equivalent doses of 300 n g were administered combined with brief visits with a pharmacotherapist on alternate weeks. Contacts with nursing personnel were scheduled to provide riedication, evaluate side effects, and monitor medication use. Adjustments in dose above 300 mg were made on the basis of psychotic symptom manifestation and side effect information, and medication was routinely increased if prodromal symptoms of relapse were detected. No systematic attempt was made to e cit the participation of family members in the treatment strategy.

Patients assigned to the targeted medication approach were treated within the context of psychosocial intervention. Medication was administered or an asneeded basis to patients who otherwise remained drugfree, initiated at moderate to high doses when prodromal experiences occurred (i.e., symptoms or signs that had characteristically preceded decompensation), and discontinued when the patient returned to a stable clinical state. In effect, the targeted strating was one of minimizing exposure to antipsychotic medication by maintaining the patient without medication during periods of clinical stability.

Psychosocial intervention consisted of assignment to a primary therapist (e.g., a psychiatric social worker or master's-level psychologist) who was available for weekly sessions of approximately 45 minutes. The primary focus of these individual sessions wa on the development of a shared view of the illness and on the delineation of the early prodromal symptoms characteristic of the patient's prior course (16); the patient and therapist remained alert for the development of such symptoms so that prompt drug intervention could be made. The therapist also helped the patient to identify environmental stressors and provide direction and support for minimizing their impact. arly in the treatment course, the therapist saw the pat ent and family (or significant other) for six weekly sessions organized around the clinical approach of Gol Istein et al. (17). The nature of the psychosis was discussed, precipitants and stressors were identified, and practical suggestions for reducing stressors and their impact were offered. Particular attention was paid to educating families as to the early signs of relapse and enlisting their participation in prompt intervention when these signs appeared.

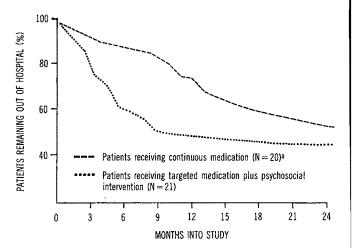
RESULTS

The sample consisted of 42 (20 men and 22 women) schizophrenic outpatients with a mean±SD age of 31.0 ± 7.6 years. Thirty-four of the patients were black and eight were white. Most (76%) were considered chronically ill, and approximately one-half were diagnosed as paranoid schizophrenic, with the remaining diagnoses fairly evenly distributed between RDC undifferentiated schizophrenia and schizoaffective disorder, mainly schizophrenic. The distributions of the two 21-patient subsamples were comparable with respect to age, sex, race, education, diagnosis, age at first hospitalization, global pathology, and level of functioning. The mean scores for the GAS fell in the range of 41 to 50, reflecting serious symptoms or impairment in functioning that obviously required treatment or attention. The mean Level of Functioning Scale total scores revealed moderate impairment; work functioning scores generally reflected little to no employment, and social functioning scores indicated limited interpersonal engagement.

Over the 2-year treatment period, 16 of the 42 patients dropped out of the study. Nine were continuous medication patients, and seven were targeted medication patients. Of the nine continuous medication patients, one refused assignment to this regimen, seven discontinued treatment (two after having been hospitalized), and one was noncompliant. Of the seven targeted medication patients who failed to continue, two discontinued treatment after they were hospitalized, two were dropped from the study while hospitalized, and three dropped out during clinical stability while medication free. Dropouts appeared to have little impact on the analysis of comparative effects; for the two treatment groups, the mean Prognostic Scale scores for dropouts were not significantly different, and the mean scores for those who completed the study were nearly identical.

The two principal dimensions of interest in examining the prescription of medication were average daily dose (chlorpromazine equivalents) and percentage of time on medication. Data on these measures indicated that the goal of effecting a substantial reduction in the prescription of medication through the use of a targeted strategy was attained. The mean±SD daily dose over the entire 2-year period (including periods in the hospital) was 720±732 mg for the continuous medication group and 196±163 mg for the targeted medication group (t=2.33, df=24, p<.05). On the average, targeted medication patients were taking medication approximately one-third of the time (31.2%) over the course of treatment. The decrease in medication produced by the targeted strategy was achieved largely

FIGURE 1. Life Table Analysis of Two Groups of Schizophrenic Outpatients Remaining Out of the Hospital Over a 2-Year Experimental Treatment Study



^aOne of the original 21 patients refused to start treatment.

through a reduction of the number of days on medication (for periods of time on medication, the average daily dose for the 14 targeted medication patients who completed the study was 628 mg). For both treatment groups, the seemingly high doses administered to our patients were the result of the high equivalent dose of haloperidol with respect to chlorpromazine in extant conversion tables (18).

Figure 1 presents hospitalization rates (ever hospitalized during the 2-year period) based on a life table analysis. Slightly more than half (11 of 21) of the targeted medication patients and slightly fewer than half (nine of 20) of the continuous medication patients had relapsed and been hospitalized by the end of the 2-year experimental period. Most of the initial hospitalizations for the targeted medication group, i.e., eight of 11, were during the first 6 months of treatment, while those for the continuous medication group tended to occur during the second year. Although the ever-hospitalized rates for the two treatments were nearly the same over the 2-year period (i.e., 52% for the targeted medication group and 45% for the continuous medication group), the differential hospitalization rate for the first 6-month period (eight patients compared with one) was significant ($\chi^2 = 4.46$, df=1, p<.05). Reflecting the fact that hospitalized patients tended to be hospitalized more than once over the 2-year period, the total number of hospitalizations for the targeted and continuous medication groups was 18 and 14, respectively.

Outcomes for the two groups in terms of ratings of symptoms and psychosocial functioning at both the 1-and 2-year evaluation points were virtually indistinguishable. Table 1 contains data for the 2-year period. The results for patients evaluated at this time were generally indicative of maintenance of the status quo with respect to levels of psychopathology; fairly adequate symptom control was characteristic (i.e., mild

TABLE 1. Outcome Scores at 2 Years of Two Groups of Schizophrenic Outpatients

	Score Targ Medic Gro (N=	eted ation oup	Score of Continuous Medication Group (N=12)		
Outcome Variable	Mean	SD	Mean	SD	
Level of Functioning Scale ^a Brief Psychiatric Rating Scale ^a	22.9	7.4	20.3	6.2	
Factor 1	2.3	1.4	2.0	1.2	
Total ^b	1.9	0.5	1.8	0.6	
Global Adjustment Scale ^a	46.8	17.6	42.5	15.4	
Quality of Life Scale ^{a,b}	3.4	1.1	2.9	1.1	

^aHigher scores are indicative of better status.

BPRS scores indicate positive symptoms on the average). Psychosocial measures (Quality of Life Scale and subscales of the Level of Functioning Scale) also revealed little change and did not differentiate treatment groups. The GAS and Level of Functioning Scale scores still evidenced "need for treatment" and "moderate" impairment, respectively. That both the targeted and continuous medication groups tended to remain stable from baseline to 2 years is illustrated in respective nonsignificant mean±SD changes of 0.8±4.16 and 1.8±5.43 for the Level of Functioning Scale total score, the principal criterion measure of outcome. When initial values were controlled for, analysis of covariance of the Level of Functioning Scale total score yielded no significant differences between the two treatment groups at the 2-year period (F=0.00, df=1, 23, p=.99).

DISCUSSION

In view of sample size and other considerations, the results and treatment experiences we report must be regarded as preliminary. They are, nevertheless, sufficiently informative to provide guidance for further development and application of the targeted neuroleptic drug reduction strategy.

In this trial, the targeted approach was applied to schizophrenic outpatients, typical of those attending public sector facilities, without incurring the dire consequences generally presupposed, such as extending hospitalization, disruption of living and work arrangements, harm to self and others, and progressive deterioration. The results of the trial consistently revealed that outcomes, as measured by positive symptoms, social and work performance, and negative symptom course, were remarkably similar in the targeted and conventional treatment groups over a 2-year course of treatment. Although the targeted drug patients required more frequent hospital admissions initially, both frequency and duration of hospitalization tended to be equivalent in the two groups over the course of

treatment. Prolonging the stabilization period after clinic admission, selecting good candidates for drug reduction (19), and utilizing the psychosocial approach before drug withdrawal might have reduced the initial risk of more frequent hospitalization in the targeted group. The lack of differences between the two groups with respect to psychosocial measures, including deficit symptoms, is also a finding that requires further study with a larger, less chronically ill sample.

The study sample was skewed toward chronicity, poverty, and minority group status, and hence the results have little direct relevance to first-episode or good-prognosis patients, for whom drug reduction strategies and the feasibility of early intervention may prove more advantageous. A limiting effect with respect to targeted medication was the assignment of unselected cases to this strategy. Although some patients became worse or relapsed during the prestudy drug-free phase, these patients were nonetheless kept in their originally assigned treatment group. This procedure will help to achieve ultimate research objectives; i.e., it will provide the opportunity to empirically define good and poor candidates for the targeted medication strategy.

The examination of outcome measures, including hospitalizations and time on medication, indicates that some patients adapted to the targeted medication procedure less well than others. There were patients in the targeted medication group who received medication almost every day; thus, in such patients the drug reduction aim was defeated, and, in effect, they became continuous drug patients. On the other hand, some patients had an even more dramatic reduction in medication on the average than that indicated for the total targeted medication sample; seven of the 14 targeted drug patients who completed the study were taking medication less than 25% of the time.

A presumptive advantage of the targeted drug approach is its suitability for some patients who are noncompliant with respect to maintenance medication. Because of side effects or for other reasons, such patients avoid taking medication during periods of clinical stability. With a targeted medication approach, the clinician can offer these patients an especially suitable pharmacotherapeutic strategy in that it stresses time-limited administration of medicat on during periods of exacerbation. Although requiring validation, another presumptive advantage of a neuroleptic drug reduction approach is that a reduction in exposure to medication may be an effective prevention strategy with regard to tardive dyskinesia. If such is the case, the substantial reduction in medication that we obtained in the majority of the patients randomized to targeted medication indicates a potentially important attribute of this particular approach vis-à-vis standard

Although statistical determination of the best candidates for the targeted medication approach awaits examination of a larger treatment sample, empirical

^bThe mean item score is listed for the BPRS and the Quality of Life Scale.

experience suggests that ideal patients should have 1) a history of a gradual, benign (or infrequent) pattern of relapse that is responsive to neuroleptic intervention, 2) past evidence of insight and cooperation with treatment efforts during the early phase of relapse, 3) the availability of a support system comprised of members who can recognize early signs of relapse and facilitate intervention, 4) the motivation to seek alternatives to continuous medication, and 5) success in an initial, time-limited drug discontinuation trial.

- 1. Heinrichs DW, Carpenter WT: The psychotherapy of the schizophrenic disorders, in Psychiatry 1982: The American Psychiatric Association Annual Review. Washington, DC, American Psychiatric Press, 1982
- 2. Heinrichs DW, Carpenter WT: The coordination of family therapy with other treatment modalities for schizophrenia, in Family Therapy in Schizophrenia. Edited by McFarlane WR. New York, Guilford Press, 1983
- 3. Anderson CM, Hogarty GE, Reiss DJ: Family treatment of adult schizophrenic patients: a psycho-educational approach. Schizophr Bull 1980; 6:490-505
- 4. Wallace CJ, Nelson CJ, Liberman RP, et al: A review and critique of social skills training with schizophrenic patients. Schizophr Bull 1980; 6:42-63
- 5. Falloon IRH, Liberman RP: Interactions between drug and psychosocial therapy in schizophrenia. Schizophr Bull 1983; 9:
- 6. Leff J, Kuipers L, Berkowitz R, et al: A controlled trial of social intervention in the families of schizophrenic patients: two-year followup. Br J Psychiatry 1985; 146:594-600
- 7. Herz MI, Szymanski HV, Simon JC: Intermittent medication for

- stable schizophrenic outpatients: an alternative to maintenance medication. Am J Psychiatry 1982; 139:918-922
- 8. Bleuler M: The Schizophrenic Disorders: Long-Term Patient and Family Studies. New Haven, Yale University Press, 1978
- Ciompi L: The natural history of schizophrenia in the long term.
- Br J Psychiatry 1980; 136:413-420
 10. Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria (RDC) for a Selected Group of Functional Disorders, 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1978
- 11. Overall JE, Klett CJ: Applied Multivariate Analysis. New York, McGraw-Hill, 1972
- 12. Strauss JS, Carpenter WT: The prediction of outcome in schizophrenia, II: relationships between predictor and outcome variables: a report from the WHO International Pilot Study of Schizophrenia. Arch Gen Psychiatry 1974; 31:37-42
- 13. Endicott J, Spitzer RL, Fleiss JL, et al: The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbance. Arch Gen Psychiatry 1976; 33:766–771
- 14. Hawk AB, Carpenter WT, Strauss JS: Diagnostic criteria and five-year outcome in schizophrenia: a report from the International Pilot Study of Schizophrenia. Arch Gen Psychiatry 1975; 32:343-347
- 15. Heinrichs DW, Hanlon TE, Carpenter WT: The Quality of Life Scale: an instrument for rating the schizophrenic deficit syndrome. Schizophr Bull 1984; 10:388-398
- 16. Carpenter WT, Heinrichs DW: Early intervention, time-limited, targeted pharmacotherapy of schizophrenia. Schizophr Bull 1983; 9:533-542
- 17. Goldstein M, Rodnick E, Evans JR, et al: Drug and family therapy in the aftercare treatment of acute schizophrenia. Arch Gen Psychiatry 1978; 35:1169-1217
- 18. Davis JM: Comparative doses and costs of antipsychotic medication. Arch Gen Psychiatry 1976; 33:858-861
- 19. Carpenter WT: Early, targeted pharmacotherapeutic intervention in schizophrenia. J Clin Psychiatry 1986; 47 (May suppl): 23 - 29

Progress in the Classification of Functional Psychoses

William Coryell, M.D., and Mark Zimmerman, B.A.

The three most widely used diagnostic systems in American psychiatry—the Feighner criteria, the Research Diagnostic Criteria, and DSM-III—appeared sequentially at 4-year intervals. The fact that the latter two systems each incorporated changes in essentially all diagnostic categories implied progress toward greater validity; however, this assumption has rarely been tested directly. To do this, the authors applied each of these three systems to 98 consecutively admitted patients with nonmanic psychoses. Although family history and 6-month follow-up data strongly supported the validity of diagnostic distinctions made in each of the three systems, they did not show increments in validity with successively developed criteria sets.

(Am J Psychiatry 1987; 144:1471-1474)

The need for clearly operational definitions in psychiatry became increasingly apparent during the 1960s and led to publication of the Feighner criteria in 1972 (1). Although these criteria quickly came into wide use, they were introduced provisionally and the authors overtly anticipated empirically based refinements.

Revisions did indeed follow. The Research Diagnostic Criteria (RDC) appeared in 1975 (2) and included operational definitions for most of the diagnoses in the Feighner criteria system as well as additional subdivisions of depressive disorder and of the psychoses formerly labeled simply as "undiagnosed." Specifically, the RDC provided operational definitions and subdivisions for schizoaffective disorder. At the same time, it redefined to varying extents all of the diagnoses originally described by Feighner et al. (1). For instance, instead of requiring a 6-month duration for schizophrenia, the RDC specified only 2 weeks; moreover, the types of psychotic phenomena required for RDC schizophrenia were much more specific than those described by Feighner et al. (1).

When DSM-III appeared in 1980, the categories originally defined by Feighner et al. (1) and modified

Copyright © 1987 American Psychiatric Association.

by the RDC had been revised again. As before, distinctions among the psychoses had undergone major shifts. The duration requirement for schizophrenia reverted to 6 months and the residual cases, those with durations of less than 6 months, were given a new name—schizophreniform disorder. As the result of numerous other changes, many patients with an RDC diagnosis of schizoaffective disorder were given, by DSM-III criteria, a label of major depression or mania with mood-incongruent psychotic features and many others met DSM-III criteria for schizophrenia.

DSM-III was not formally introduced as a revision of the RDC, nor was the RDC officially a modification of the Feighner criteria. In effect, however, subsequent criteria sets were revisions; i.e., the latter definitions came into wide use and, in many settings and for many purposes, supplanted the former ones. The assumptions underlying the inherent changes thus become important. Since each criteria set reflected the consensus of experts whose recommendations were presumably data based, the encouraging conclusion follows that psychiatric nosology in America has been evolving toward greater overall validity. Unfortunately, there is almost no direct evidence to support this conclusion. The lack of such evidence deserves attention, particularly in light of the publication of yet another revision, DSM-III-R.

In the following analysis, we searched for evidence that the RDC and DSM-III incorporate progressively valid distinctions between functional psychoses. To do this, we employed family study and outcome data, since these provide the most commonly used anc so far the most successful means for studying comparative validity.

METHOD

We previously reported diagnostic comparisons of historical, demographic, and clinical features and described the intake procedures in more detail (3). Briefly, consecutively admitted patients at the University of Iowa psychiatric hospital were invited to participate if 1) they currently exhibited delusions or hallucinations, 2) their axis I differential diagnosis at admission did not include an organic mental disorder or mania, and 3) they had no medical conditions and had been taking no medications that would invalidate either the thyrotropin-releasing hormone stimulation

Received Oct. 14, 1986; revised March 9, 1987; accepted April 22, 1987. From the Department of Psychiatry, University of Iowa. Address reprint requests to Dr. Coryell, Department of Psychiatry, University of Iowa College of Medicine, 500 Newton Rd., Iowa City, IA 52242.

test or the dexamethasone suppression test. Thus, no patient was excluded because his or her psychiatric history was incomplete or confusing.

Because we designed this study to explore comparative validity, we used an elaborate and careful diagnostic procedure. A research assistant (M.Z.), trained by expert raters involved in the NIMH Collaborative Study for the Affective Disorders—Clinical Research Branch (4), first reviewed all available medical records. He then administered a full Schedule for Affective Disorders and Schizophrenia (SADS) (5) to 98 patients and based the item ratings both on medical records and on patient responses. A psychiatrist (W.C.) then independently reviewed records, interviewed patients, and assigned diagnoses according to three systems—the Feighner criteria, the RDC (6), and DSM-III. Finally, we met and arrived at a consensus diagnosis in each of these three systems.

The Family History-RDC (FH-RDC) (7) was used to elicit relevant family history from each proband. Probands then chose a best informant—the individual most likely to know of psychopathology in the proband's first-degree family members; another research assistant who was blind to proband diagnosis applied the FH-RDC with this individual. Both sources of information were used to reach consensus diagnoses. Because proband diagnostic groups differed significantly by age, we used the Stromgren method (8) to age correct the denominators used for morbid risk figures.

Six months after admission, the primary research assistant recontacted the patients and administered a semistructured follow-up interview patterned after the Longitudinal Internal Follow-Up Evaluation (LIFE) (9) used in the NIMH Collaborative Study. In this way he determined those who had recovered, i.e., those who had experienced at least 2 months without psychotic features and who exhibited insight into these features at follow-up. He also assigned a Global Assessment Scale (GAS) score (10) to the patients during the final week of follow-up. Higher scores on this scale reflected better levels of overall functioning and of psychopathology.

We contrasted three major diagnostic groups in each system: 1) depression without diagnostically important atypical features, 2) schizophrenia, and 3) an intermediate group—undiagnosed, schizoaffective disorder, depressed type, or major depression with moodincongruent psychotic features according to the Feighner criteria (1), RDC (2), and DSM-III systems, respectively. The total number so classified differed slightly by group, since three patients had paranoid disorder by the Feighner criteria, one had atypical psychosis by the RDC, and six had paranoid or schizoaffective disorder according to DSM-III.

RESULTS

Of 34 patients with DSM-III schizophrenia, only 20 (58.8%) and 18 (52.9%) met definite or probable

criteria for schizophrenia as contained in the RDC and Feighner criteria systems, respectively. The RDC was more often in accord with the Feighner criteria for schizophrenia; of 21 who met the RDC for definite or probable schizophrenia, 18 (85.7%) also satisfied the Feighner criteria definition. However, only 17 (58.6%) of the 29 patients who met the RDC for definite or probable major depression also met the corresponding Feighner criteria definition.

Despite the likelihood that a given patient would be diagnosed inconsistently across systems, the overall pattern of differences in outcome ratings and morbid risk among relatives was strikingly similar (table 1). In each system, schizophrenic patients, when compared to patients with major depression, were significantly less likely to recover, had significantly lower GAS scores at 6 months, and had lower morbid risks for affective disorder among their relatives (no relative was given a diagnosis of schizophrenia). With one exception, the intermediate or indeterminant group (undiagnosed, schizoaffective, or major depression with mood-incongruent psychotic features) in each system took intermediate positions for each of these measures.

No trend favoring one system over another was confirmed across both outcome and family history measures. Thus, although recovery rates distinguished DSM-III mood-congruent patients from DSM-III schizophrenic patients more sharply than they distinguished patients with RDC major depression from patients with RDC schizophrenia, morbid risk figures for depression among relatives favored the RDC system.

DSM-III did reduce somewhat the size of the intermediate group; almost half (48.0%) of the sample was designated undiagnosed or schizoaffective in the other two systems, and only one-third (33.7%) had major depression with mood-incongruent psychotic features in DSM-III. Reduction of an uncertain group is an advance if it does not involve an increase in heterogeneity in the other groups. In this study, 14 patients with RDC schizoaffective disorder had a diagnosis of schizophrenia in the DSM-III system; none of these patients recovered, although 18 (54.5%) of the remaining RDC schizoaffective patients did so. Thus, the DSM-III shift in diagnosis did not introduce prognostic heterogeneity. However, the family history figures showed an opposite trend; morbid risk for depression was 20.2% for patients with both RDC schizoaffective disorder and DSM-III schizophrenia but 13.6% for the remaining RDC schizoaffective patients.

DISCUSSION

Despite frequently discordant diagnoses, these results firmly support the validity of each of three competing diagnostic systems. They do not, moreover, support any one system over the others. That is not to say they are all equally valid. To establish that would

TABLE 1. Classification by Three Diagnostic Systems of 98 Patients^a With Nonmanic Functional Psychoses

		6-Mont	th Follow-U _l	Major Depression in Relatives				
Diagnostic System	Number	Recovered		GAS Score		Number	epression i	Mórbid
	Followed	N	%	Mean	SD .	Affected	BZb	Risk (%)
Feighner criteria (N=95)								
Definite depression (N=29)	29	20	69.0	63.0	19.7	39	148	26.3
Undiagnosed (N=47)	46	15	32.6	50.2	17.0	35	218	16.2
Schizophrenia (N=19)	18	2	11.1 ^c	42.9 ^d	16.5	7	83	8.4^{e}
RDC (N=97)								
Major depression (N=29)	29	17	58.6	58.7	20.9	35	144	24.4
Schizoaffective disorder (N=47)	46	18	39.1	53.1	17.3	41	220	18.6
Schizophrenia (N=21)	20	2	10.0^{f}	41.5 ^g	6.3	9	94	9.6 ^h
$DSM-III^{\prime}(N=92)$								
Major depression								
With mood-congruent								
psychotic features (N=25)	25	19	76.0	65.4	18.9	30	137	21.9
With mood-incongruent								
psychotic features (N=33)	33	13	39.4	51.7	17.4	35	158	22.2
Schizophrenia (N=34)	33	8	6.1 ⁱ	43.1 ^j	15.4	18	145	12.5

aGroup numbers differ as three patients had paranoid disorder by the Feighner criteria, one had an atypical psychosis by RDC, and six had

require a more elaborate design and, preferably, a wider array of validators, including treatment response and biological measures. We note here only that there is no consistent trend toward increasing validity with subsequently developed systems.

Evidence that the other diagnostic revisions incorporated in these systems have improved validity is likewise unavailable. Very few investigators have considered this issue, and among those who have, some have found that revisions have not led to improvement. Cloninger et al. (11) applied Feighner and DSM-III criteria to probands and relatives and found that the Feighner criteria definition for hysteria (Briquet's syndrome) appeared to be familial but the DSM-III definition (somatization disorder) did not.

We are not implying that diagnostic revisions are never warranted or that relevant data have not accumulated. Rather, we conclude that the rate of revisions has outpaced the rate at which investigators in the field have generated and replicated the data on which such changes should be based. Many changes, we suspect, have been based on only one study and in many other instances on no more than committee members' clinical intuition. By this process, changes in criteria are likely to reflect new committee membership rather than new, empirically based knowledge.

Regrettably, unwarranted changes cost the field a great deal. Not only does diagnosis in psychiatry begin to appear whimsical to the public and to the rest of medicine, but the accumulation of knowledge regarding a given condition becomes slower and more difficult; investigators using different criteria will describe groups that only partially overlap despite identical labels. For these reasons, we support a far more circumspect approach to the revision of criteria intended for general use. Those who propose specific changes should be able to reference empirical and independently replicated evidence that the change increases diagnostic reliability or validity. We predict that very few proposals would meet such criteria within a given 4-year period and that major revisions would then occur at considerably longer intervals.

- 1. Feighner JP, Robins E, Guze SB, et al: Diagnostic criteria for use in psychiatric research. Arch Gen Psychiatry 1972; 26:57-63
- 2. Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria. New York, New York State Psychiatric Institute, Biometrics Research, 1975
- 3. Coryell W, Zimmerman M: Demographic; historical and symptomatic features of the nonmanic psychoses. J Nerv Ment Dis 1986; 174:150-153
- Katz MM, Selunda SK, Hirschfeld RMA, et al: NIMI I Clinical Research Branch Collaborative Program on the Psychobiology of Depression. Arch Gen Psychiatry 1979; 36:765-771
- 5. Endicott J, Spitzer RL: A diagnostic interview: the Schedule for Affective Disorders and Schizophrenia. Arch Gen Psychiatry 1978; 35:837-844
- Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria (RDC) for a Selected Group of Functional Disorders, 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1978
- 7. Andreasen NC, Endicott J, Spitzer RL, et al: The family history method using diagnostic criteria: reliability and validity. Arch Gen Psychiatry 1977; 34:1229-1235

paranoid or schizoaffective disorder by DSM-III. bBZ=bezugzeiffer (age-corrected number of relatives at risk).

 $^{^{}c}\chi^{2}=17.5$, df=2, p<.001. dF=8.0, df=2, 90, p<.001.

 $_{f}^{c}\chi^{2}=12.7, df=2, p<.01.$

 $f_{\chi^2=11.8}^{f_{\chi^2=11.8}}$, df=2, p<.005. gF=5.4, df=2, 92, p<.01.

 $f\chi^2 = 8.17$, df=2, p<.05.

²=29.8, df=2, p<.001.

 $^{^{1}}F=12.1$, df=2, 88, p<.001.

- Stromgren E: Zum ersatz des Weinbergachen Abgekerzten Verfahrens. Zeitschrift fur die Gezamte Vendoyie und Psychiatrie 1935; 153:784–797
- Psychiatrie 1935; 153:784-797

 9. Shapiro RW, Keller MB: Longitudinal Internal Follow-Up Evaluation (LIFE). Boston, Massachusetts General Hospital, 1979
- Endicott J, Spitzer RL, Fleiss JL, et al: The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbance. Arch Gen Psychiatry 1976; 33:766–771
- 11. Cloninger CR, Martin RL, Guze SB, et al: A prospective follow-up and family study of somatization in men and women. Am J Psychiatry 1986; 143:873–878

Reports of Childhood Incest and Current Behavior of Chronically Hospitalized Psychotic Women

James C. Beck, M.D., Ph.D., and Bessel van der Kolk, M.D.

Of the female patients (N=26) on a state hospital unit who remained chronically institutionalized and actively psychotic despite psychopharmacologic and psychosocial treatment, 12 (46%) reported histories of childhood incest. These 12 patients were more likely than the others to engage socially with ward staff. A higher proportion had sexual delusions, affective symptoms, substance abuse, suspected organicity, and major mental problems, and they spent more time in seclusion than other patients. The authors acknowledge the difficulty of assessing the accuracy of reports of incest. They discuss the implications of a possible relationship between incest and severe, intractable psychotic disorder.

(Am J Psychiatry 1987; 144:1474-1476)

This research grew out of clinical observations made during a weekly treatment review conference that focused primarily on the psychopharmacologic treatment of patients with intractable psychotic disorders. Unexpectedly, a substantial proportion of the female patients reported histories of childhood incest. Further, we observed a characteristic social behavior of the women who reported these histories: they often approached us and other staff and began a conversation. These conversations sometimes focused on realistic problems and sometimes on delu-

sional concerns, and they were often characterized by inappropriately strong affect. These same patients also appeared to be more agitated and assaultive than other patients.

Review of the literature revealed no prior reports of a specific relationship between a history of childhood incest and adult psychosis, although a relationship between childhood psychosis and sexual abuse has been noted (1, 2). In one study, 26% of hospitalized adult women reported childhood sexual abuse and assault, but the authors did not report diagnoses (3). Of outpatients with borderline personality disorder, 60% claimed a history of childhood physical or sexual abuse (4). Among 205 women with histories of childhood incest, those with the worst adult outcomes were likely to have histories of early, frequently violent, and long-lasting sexual abuse at the hands of primary caretakers (5). Numerous reports have linked childhood physical and sexual abuse with excessive aggression, chronic hyperactivity, dissociative states, and chronic feelings of depression and helplessness (1, 6-9), but to our knowledge, no long-term prospective studies have charted the life course of these children.

This study was an attempt to elicit information on the characteristics of chronically psychotic female patients who report a history of childhood incest.

METHOD

The patients lived and were treated on two 40–50-bed wards on the Cambridge-Somerville Unit of Metropolitan State Hospital. Every patient on this unit has an evaluator, who is responsible for the patient's psychosocial treatment, and many patients receive individual psychotherapy.

Received March 20, 1986; revised Jan. 28, 1987; accepted April 13, 1987. From the Department of Psychiatry, Cambridge Hospital; and the Department of Psychiatry, Massachusetts Mental Health Center, Boston. Address reprint requests to Dr. Beck, Department of Psychiatry, Cambridge Hospital, 1493 Cambridge St., Cambridge, MA 02139.

Copyright © 1987 American Psychiatric Association.

Because we wished to obtain an unbiased sample of chronically hospitalized women, many of whom were incompetent to give informed consent, we limited the study to record review and interview of clinical staff. The study was approved by the Commonwealth of Massachusetts Department of Mental Health Human Subjects Committee.

We reviewed all records and interviewed the evaluator of every chronically hospitalized female patient, focusing on early history and current symptoms, and we completed the Carmen checklist of psychosocial history and symptoms (3) for every patient. A staff member who was blind to our research interest independently rated each patient as follows: "On a scale from 1 to 10, rate how much this patient approaches versus avoids staff on the ward. An example of a 10 would be Ms. X. An example of a 1 would be Mr. Y."

To provide an estimate of interrater reliability, one of us (J.C.B.) independently rated approach-avoidance for each patient. Statistics used were t test (two-tailed), Fisher's exact test, and intraclass and Pearson correlations.

RESULTS

Twenty-five of 52 women had been continuously hospitalized for more than 1 year, with the exception that two of the 25 had each spent 3 days in a nursing home. A 26th patient who had been hospitalized 11 of the past 12 months and many times previously was included in the sample. The patients' median age was 36.5 years; the median age of these 26 patients at first hospitalization was 17.5 years. The patients had been hospitalized continuously for a median of 3.8 years. Three had some post-high-school education, nine had finished high school, and 14 had not. Eighteen had never married; eight had. Eleven had children; five had a history of abortion. Sixteen had worked at least briefly; 10 had never worked.

Fourteen patients were given a DSM-III diagnosis of chronic undifferentiated schizophrenia; three, paranoid schizophrenia; two, schizoaffective disorder; and one each, paranoia, major recurrent depression, bipolar disorder, and borderline personality disorder. Two patients were given a diagnosis of seizure disorders, and the diagnosis of one patient was unclear. Twenty-two patients were chronically and actively delusional. In 23 cases, the clinician-evaluators interviewed had worked with their patients for more than 1 year; the median was 2.7 years. Eighteen functioned as psychotherapists and eight as case managers.

History of childhood incest was inferred primarily from patients' statements and was scored as none, possible, probable, highly likely, or inadequate record. In eleven of 26 cases (42%), there was no reported incest. In three cases (12%), records were inadequate. Of the 12 patients (46%) who reported a history of incest, four cases were scored as possible, four as probable, and four as highly likely.

In three cases, family members had confirmed the initial reports, with the following consequences: one divorce, one social agency barred a father from urther contact with his daughter, and one daughter was removed to a foster home. In a fourth case, a social service agency concluded after investigation that incest had occurred. In two additional cases, our stiff observed a current sexual relationship between father and daughter, a relationship that was also reported by other family members.

The sexual activities reported were intercourse (N=3), vaginal stimulation (N=2), fondling N=2), and oral-genital contact (N=2); the activity was unspecified in three cases. The reported abusers were the father (N=8), stepfather (N=1), brother (N=1), and mother (N=1). The age at first abuse ranged from 2 to 14 years; the median was 7 years. Eight patients reported ongoing abuse over periods ranging from 1 to 9 years.

The 12 patients with a history of childhook incest differed significantly from the 11 patients witho it such a history on a number of variables. They were younger (mean \pm SD age = 32 ± 12.20 versus 43 ± 9.25 years; t=2.46, df=20, p<.05), a higher proportion had suspected organicity (nine of 12 versus one of 11; p=.002, Fisher's exact test for this and sub-equent comparisons), and they more often had sexua! delusions (five versus none) and preoccupations (one versus none) (p=.009), histories of depressive symptoms (11 versus four; p=.008), substance abuse (seven versus two; p=.05), and major medical problems (six versus one; p=.04). We found no difference between patients with and without a history of incest in diagnosis, education, marital and maternal status, work sistory, conduct disorder, anxiety, somatic complaints, history of psychiatric illness in either parent, parental a icoholism, and family violence.

Of five patients with a history of incest who had active sexual delusions, one believed that her body was covered with ejaculate and another that she lad had sexual relations with public figures. Two of he five patients were also compulsively sexually active. A sixth patient with a history of incest was preoucupied with sexual thoughts and was also compulsively sexually active.

The intraclass correlation for the ratings of patient approach-avoidance was .84. The mean=:D approach-avoidance score for the 12 patients with a history of incest was 7.08 ± 2.68 , compared with 2.70 ± 1.93 for the patients without such a history (t=4.32, df=20, p<.0001).

Eight patients with a history of incest and three without such a history were secluded because they had threatened or assaulted others at some time during the past 6 months (p=.08, Fisher's exact test). The patients in the first group spent more time in a clusion than those in the second group (mean ± SD=32 × 17.14) versus 18±1.0 hours, n.s.).

The Pearson correlation between patients' ages and number of years since first hospitalization was .95.

Thus, the obtained difference between the two groups in approach-avoidance could have been due to differences in age: younger patients reporting incest might have more intact social skills than older patients who did not report incest and who had been ill longer. Therefore, we identified a subgroup of six patients with a history of incest who were comparable in age to the group without such a history and compared these two groups. The relationship between approachavoidance and reported incest remained, as did the higher prevalence of depression.

DISCUSSION

In this sample of 26 chronically hospitalized psychotic women, 12 reported histories of incest. In contrast to the patients without such a history, they continued to seek social contact with others. However, their attempts at social contact were characterized by hyperarousal and agitation, disorganized thinking, and, in some cases, delusions. The patients with a history of incest were also more likely to threaten or assault others. These characteristic behaviors could have been caused by the incest experience: childhood incest is frequently followed by chronic posttraumatic stress disorder (5, 10, 11), a condition characterized by the reliving of thoughts, feelings, or actions related to earlier traumatic experiences (8, 12, and DSM-III). In both adults (13) and children (2) with posttraumatic stress disorder, emotional stimulation can lead to disorganization of thought processes. When presented with stimuli even vaguely related to sexuality, children who have experienced incest may become hyperaroused, intensely preoccupied with sexual matters, and delusional (2). To our knowledge, there are no long-term studies of these children. The fact that five of our patients with a history of incest had sexual delusions is consistent with these reports.

The validity of patients' self-reports of incest has been questioned frequently in the clinical literature. In our sample, there was supporting evidence in half the cases: reports from parents or social agencies or observations of sexual contact between father and daughter. Practical and ethical impediments to corroborating these reports force us to rely on clinical judgment in deciding whether the reports were truthful. Several arguments support the credibility of the reports. The incest was typically reported in long-term psychotherapy to clinicians who were not looking for it and who had no particular interest in finding it. The reports persisted long after the episodes were over, when the family was no longer intact, so that the patient obtained no obvious secondary gain related to the family. Finally, the reports did not appear to be attention getting. Patients talked privately to their therapists, not gratuitously to other staff or patients. This observation is consistent with earlier observations that incest victims reluctantly disclose the incest, attempt to protect their abusers, and blame themselves for the experience (10, 11, 14).

Chronically hospitalized, intractably psychotic patients who report a history of childhood incest, and who show a persistent behavior pattern that attempts to involve others in their delusional concerns, have not been diagnostically separated from the group of patients with schizophrenias. From our initial observations, the possibility of such a separate subgroup can only be raised, not confirmed. We believe that our results should be taken as a basis for collecting prospective data on reports of incest from hospitalized psychiatric patients, so that the correlations we have observed between history and current behavior can be evaluated in a more rigorously designed study.

- Cichetti D: The emergence of developmental psychopathology. Child Dev 1984; 55:1–7
- Fish-Murray C, Koby E, van der Kolk BA: Cognitive impairment in abused children, in Psychological Trauma. Edited by van der Kolk BA. Washington, DC, American Psychiatric Press, 1987
- Carmen EH, Rieker PP, Mills T: Victims of Violence and Psychiatric Illness. Washington, DC, American Psychiatric Press, 1987
- Herman JL: Histories of violence in an outpatient population.
 Am J Orthopsychiatry 1986; 65:137–141
- Herman J, Russell D, Trocki K: Long-term effects of incestuous abuse in childhood. Am J Psychiatry 1986; 143:1293–1296
- Adams-Tucker C: Proximate effects of sexual abuse in childhood: a report on 28 children. Am J Psychiatry 1982; 139: 1252–1256
- Green A: Child abuse: dimensions of psychological trauma in abused children. J Am Acad Child Psychiatry 1983; 22:231– 237
- van der Kolk BA (ed): Psychological Trauma. Washington, DC, American Psychiatric Press, 1987
- Finkelhor D: Child Sexual Abuse: New Theory and Research. New York, Free Press, 1984
- Donaldson MA, Gardner R: Diagnosis and treatment of traumatic stress among women after childhood incest, in Trauma and Its Wake: The Study and Treatment of Post-Traumatic Stress Disorder. Edited by Figley CR. New York, Brunner/Mazel, 1985
- Goodwin J: Post-traumatic symptoms in incest victims, in Post-Traumatic Syndromes in Children. Edited by Pynoos R, Eth S. Washington, DC, American Psychiatric Press, 1985
- Horowitz MJ: Stress Response Syndromes, 2nd ed. New York, Jason Aronson, 1986
- 13. van der Kolk BA, Ducey CP: Clinical implications of the Rorschach in posttraumatic stress, in Posttraumatic Stress Disorder: Psychological and Biological Sequelae. Edited by van der Kolk BA. Washington, DC, American Psychiatric Press, 1984
- Gelinas DJ: The persisting negative effects of incest. Psychiatry 1983; 46:312–332

A Comparison of the Diagnostic Interview Schedule and Clinical Diagnosis

Harold P. Erdman, Ph.D., Marjorie H. Klein, Ph.D., John H. Greist, M.D., Sandra M. Bass, M.S., Jane K. Bires, M.A., and Paula E. Machtinger, M.S.W.

The Diagnostic Interview Schedule (DIS) was administered to 220 psychiatric patients by lay interviewers. Kappas for agreement between DIS and chart diagnoses ranged from .39 to -.03 and averaged .14 for 13 diagnostic categories. Agreement was best for affective, obsessive-compulsive, and schizophrenic disorders and was poorest for phobias where patients overemphasized fears. The authors suggest that clinician evaluation of information collected by the DIS is important, especially in diagnosing individual cases.

(Am J Psychiatry 1987; 144:1477–1480)

 Γ he NIMH Diagnostic Interview Schedule (DIS) is an important outgrowth of the trend toward specification of diagnostic criteria (reference 1 and DSM-III) and the development of structured interview procedures (2-4). Because the DIS has served as the major diagnostic interview in the NIMH Epidemiologic Catchment Area studies (5) for prevalence estimates (6, 7) and utilization profiles (8), which will be used for mental health services policy and planning, the question of its correspondence with clinical practice is highly relevant. Although lay and clinician interviewers have moderately comparable results when using the DIS or other structured protocols (4, 9, 10), agreement has been considerably less when DIS and more routine clinical diagnoses have been compared. Robins et al. (11) examined chart diagnoses in relation to the DIS in a patient sample and found kappas (calculated from table 13 in reference 11) ranging from -.01 (phobia) to .40 (bipolar disorder), with an average of .22 for 10 diagnoses. Helzer et al. (12) compared clinical diagnoses from a DSM-III checklist to

the DIS (in a sample of "cases" selected from a community sample) and found kappas ranging from .12 obsessive-compulsive disorder) to .63 (alcohol abuse/dependence), with an average of .30 (weighted; average of .40 unweighted). Anthony et al. (13) used an adapted Present State Examination (PSE) in a community sample and found uniformly lower kappas—from -.02 (paric disorder) to .35 (alcohol abuse/dependence), with an average of .15 for eight diagnoses.

The present study was part of a larger effort to develop a computer-administered form of the DI3 (14). To provide perspective for interpreting comparisons between human and computer-administered DIS interviews, we also compared the results of DIS interviews (clinician-administered) with clinical diagnosis. While we recognize that clinical diagnosis is not the ultimate standard for purposes of assessing validity, it represents common practice and is therefore one step in establishing validity. We expect that as a structured instrument, the DIS should be more reliable than an unstructured process such as clinical diagnosis. However, while reliability is a virtue, it is not the only criterion for a diagnostic instrument that will form the basis of our current picture of mental health needs and services deployment. A secondary concern is with the potential clinical utility of the DIS; as it becomes widely employed as a research instrument, it may play a role in decisions about care in individual cases. In either case, it is important to understand how well the DIS compares with routine diagnostic practice in a clinical setting.

METHOD

The patients came primarily from inpatient settings (university, Veterans Administration, and state and private hospitals); outpatients came from a community mental health center and anxiety specialty cliric. Patients (18 years or older) were approached by research staff about participating in the study if they had admitting diagnoses of schizophrenia; affective, anxiety, adjustment, or substance abuse disorders; or antisocial personality disorders. Patients with organic disorders were excluded. Of the 220 patients interviewed (130 men and 90 women), most (N=210) were

Received Aug. 22, 1986; revised March 16, 1987; accepted April 13, 1987. From the Department of Psychiatry, University of Wisconsin-Madison. Address reprint requests to Dr. Greist, Department of Psychiatry, University of Wisconsin Medical School, 600 Highland Ave., Madison, WI 53792.

Supported by NIMH grants MH-32624 and MH-70903 and by the University of Wisconsin Graduate School and the Department of Psychiatry.

The authors thank the interviewers, Judith Carroll for editorial assistance, and Jean Clatworthy for clerical assistance.

Copyright © 1987 American Psychiatric Association.

TABLE 1. Agreement Between Diagnostic Interview Schedule (DIS) and Clinical Diagnosis

	Agreement (κ) \	With Current Clinical	Diagnosis (N=220)	Agreement (κ) With Psychiatrist-Administered DIS in St. Louis Validity Studies		
	Current DIS	Lifetime DIS	Lifetime DIS Diagnosis With Exclusion	Lay Interviewer	Chart	
Diagnosis	Diagnosis	Diagnosis	Criteria	DIS	Diagnosis	
Schizophrenia	.31	.28	.30	.60	.27	
Schizophreniform disorder	01	03	03			
Bipolar disorder	.35ª	.35	.39	.65	.40	
Atypical bipolar disorder	.07ª	.07	.06			
Major depression	.35	.32	.32	.63	.18	
Dysthymia	.16 ^a	.16	.16			
Obsessive-compulsive disorder	.39	.39	.10	.60	.10	
Agoraphobia	.22	.14	.09	.67		
Social phobia	03	03	.09			
Simple phobia	.10	.04	.03	.47		
Panic disorder	.00	01	.03	.40	.22	
Alcohol abuse/dependence	.13	.25	.25	.80	.34	
Other drug abuse/dependence	01	.23	.23			
Antisocial personality	02	.07	.15	.63		

^aThe number reported is for lifetime diagnosis, since the DIS does not assess current bipolar, atypical bipolar, and dysthymic disorders.

inpatients. Their mean age was 34 years (range=18–86); 127 were single, 39 were married, and 54 were formerly married. Reflecting the local community, many had attended (45%, N=99) or graduated from (18%, N=40) college; 37% (N=81) had attended high school.

The DIS was administered by lay interviewers trained by procedures established by Washington University (4). Five of the 11 interviewers had some training in mental health-related fields, but none were psychiatrists or clinical psychologists. When reliability was assessed for nine sets of randomly paired interviewers, there was 96% agreement for the major DIS screening questions and also across all diagnoses.

Except for long-term state hospital patients, patients were interviewed as soon after admission as possible (median=5 days, mean=8.5, range=1-85). All areas of the DIS were included except for the somatization section, which was eliminated because of its length.

Agreement between DIS and clinical diagnoses was assessed by kappa. The following three DIS diagnoses were made: current (within 2 weeks), with exclusion criteria; lifetime, with exclusion criteria; and lifetime, without exclusion criteria. Tobacco dependence, psychosexual dysfunction, pathological gambling, and anorexia were not included in analyses. Clinical diagnoses were based on information in the charts and were made by staff who were blind to DIS results. Generally, we used diagnoses made after staffing or discharge diagnoses because they were based on more complete information than were the admitting diagnoses.

RESULTS

Rates of current DIS diagnoses were comparable to chart diagnoses, although the DIS made significantly (McNemar's test for bias) more diagnoses of major depression ($\chi^2=9.49$, df=1, p<.05), atypical bipolar

disorder ($\chi^2=11.25$, df=1, p<.05), social phobia ($\chi^2=4.50$, df=1, p<.05), and simple phobia ($\chi^2=15.06$, df=1, p<.05) and significantly fewer diagnoses of drug abuse/dependence ($\chi^2=10.56$, df=1, p<.05). The DIS made no current diagnosis in 25% of the cases (N=55), but most (70%, N=39) of those patients had lifetime DIS diagnoses.

Kappas in the current study (table 1) were all lower than kappas (included for reference) obtained when lay interviewers and psychiatrists both used the DIS (4), but they were generally comparable to those of Robins et al. (11) when psychiatrist DIS and chart results were compared. Agreement was greatest for obsessive-compulsive, affective, and schizophrenic disorders. For drug disorders and phobias, kappas were essentially zero; i.e., agreement was no better than chance (the low kappa for panic disorder was due to its low frequency—one case). To determine whether discrepancies were due to clinical diagnoses being more longitudinal, chart and lifetime DIS diagnoses were also compared (table 1, column 2), with some improvement in agreement for substance use. Current diagnoses underrepresented substance use because most hospitalized patients did not have access to drugs or alcohol. In addition, results with and without diagnostic hierarchies (column 2 versus column 3) showed little difference, suggesting that discrepancies were not due to the clinician's use of DSM-III exclusion criteria. This was also the experience of Robins et al. (11). DIS results were also compared with admitting diagnoses (not shown in table 1) to determine whether differences in time frame accounted for the discrepancies, but kappas were essentially similar.

The most striking discrepancies occurred with phobias, where the DIS made many more diagnoses than clinicians did (14 versus four for social phobia; 18 versus one for simple phobia). There were several reasons for what appears to be DIS overdiagnosis of phobias. First, the DIS questions for phobia combine consideration of the existence of a fear with judgments about unreasonableness and avoidance, which are not specifically followed up in probes, so that instances of fear without avoidance and reasonable fears are scored positively. Second, phobias are diagnosed by very few questions compared to other categories. Finally, clinicians may discount phobic symptoms in the presence of other disorders, thus using different exclusion criteria.

Reasons for other discrepancies between DIS and clinical diagnoses varied. When the chart diagnosis was schizophrenia and the DIS differed (19 cases), the DIS was most likely to have made no diagnosis (10 cases) or diagnosed major depression (three cases). Analysis of specific interviews suggested that the patients would endorse psychotic symptoms but downplay their severity. This is consistent with the report of Witten et al. (10). When the DIS diagnosed schizophrenia and clinicians did not (18 cases), their diagnosis was schizophreniform disorder (four cases), bipolar disorder (three cases), or other disorders such as schizoaffective, borderline, or posttraumatic stress, which were not diagnosed by our version of the DIS. Differential diagnoses involving schizophrenic and affective symptoms were complicated by patients' difficulties with questions about symptom sequences (e.g., "Did you ever have any of these beliefs or experiences [specific psychotic symptoms inserted here] before your first spell of feeling [specific mood symptoms inserted here]?").

When bipolar disorder was undiagnosed by the DIS (22 cases), patients were most likely to have received no DIS diagnosis (12 cases) because they had not reported the necessary symptoms or did not report them for the worst episode. In the case of DIS overdiagnosis of atypical bipolar disorder, chart diagnoses of full-blown bipolar disorder or personality disorders were most frequent. Other research has found that self-report measures underdiagnose bipolar disorder (15). Other discrepancies involved clinical diagnoses of major depression or borderline personality disorder. When the DIS did not concur with clinically diagnosed major depression, it was again most likely to make no diagnosis (nine cases) or a diagnosis of bipolar disorder (three cases) or schizophrenia (three cases). Conversely, when the DIS diagnosed major depression and clinicians did not (32) cases), personality disorders (including those not diagnosed by the DIS) were diagnosed (14 cases), followed by less severe depressive disorders (dysthymia, seven cases; adjustment disorder, six cases) and bipolar disorder (five cases). This finding suggests that the DIS may not allow patients sufficient opportunity to place depressive symptoms in context, as clinicians do.

DISCUSSION

Our results were comparable to those of Robins et al. (11) (lay interviewer DIS diagnosis versus chart

diagnosis) and better than those of Anthony et al. (13) for a community sample (lay interviewer DIS diagnosis versus psychiatrist diagnosis based on a modified version of the PSE) but worse than the Helzer et al. (12) comparison of the DIS to more structured clinician checklist diagnoses. While the DIS in the hands of lay interviewers has proved to be comparable to other structured methods (4, 9, 10), its consistent'y poor agreement with clinical diagnosis is cause for concern. Unfortunately, the present study did not incude an independent expert diagnosis based on a structured interview, so we cannot provide any definitive answers, but our review of discrepant cases pointed to problem areas. In some cases, patients denied or minimized symptoms that were known to clinicians. In other cases, clinicians may have interpreted sy nptoms differently or used different exclusion criteria. The low rate of phobias among clinical diagnoses may have been due to clinicians subsuming patients' fea: s under more "important" diagnoses (e.g., schizophrenia, major depression). It is interesting that two principal architects of DSM-III support reductions in exclusion criteria for anxiety disorders (16). Patients' di:ficulties with complex questions in the DIS, i.e., questions with multiple parts or questions about symptom sequences, may also have contributed to discrepancies in phobias and affective disorders. Finally, clinicians made diagnoses not made by the DIS. The expansion of the DIS to include more categories of personality disorder would help solve this problem.

The DIS was designed for large-scale epidemiologic research. The current study, on the other hand, was an attempt to examine the DIS's performance in a clinical setting, and our results raise questions about it; use for clinical purposes. Still, the DIS is definitely useful in individual cases for data gathering, especially in areas clinicians often overlook such as substance abused dependence. Because of its weaknesses in resolving complicated issues of timing, context, or symptom precedence, we believe that the most valid diagnostic procedure would be for clinicians to combine the structured data gathered by the DIS with other information in order to make diagnoses for research or patient care.

- 1. Feighner JP, Robins E, Guze SB, et al: Diagnostic criteria for use in psychiatric research. Arch Gen Psychiatry 1972; 16:57-63
- Wing JK, Cooper JE, Sartorius N: Measurement and Classification of Psychiatric Symptoms. Cambridge, Cambridge University Press, 1974
- Endicott J, Spitzer RL: A diagnostic interview: the Schedule for Affective Disorders and Schizophrenia. Arch Gen Psychiatry 1978; 35:837–844
- 4. Robins LN, Helzer JE, Croughan JL, et al: National institute of Mental Health Diagnostic Interview Schedule: its history, characteristics, and validity. Arch Gen Psychiatry 1981; 38:381-
- Regier DA, Myers JK, Kramer M, et al: The NIMH Epidemiologic Catchment Area program. Arch Gen Psychiatry 1984; 41: 934-941
- 6. Robins LN, Helzer JE, Weissman MM, et al: Lifet me preva-

- lence of specific psychiatric disorders in three sites. Arch Gen Psychiatry 1984; 41:949–958
- Myers JK, Weissman MM, Tischler GL, et al: Six-month prevalence of psychiatric disorders in three communities. Arch Gen Psychiatry 1984; 41:959–967
- Shapiro S, Skinner EA, Kessler LG, et al: Utilization of health and mental health services. Arch Gen Psychiatry 1984; 41:971– 978
- 9. Hesselbrock V, Stabenau J, Hesselbrock M, et al: A comparison of two interview schedules: the Schedule for Affective Disorders and Schizophrenia-Lifetime and the National Institute of Mental Health Diagnostic Interview Schedule. Arch Gen Psychiatry 1982; 39:674–677
- Witteen U, Semler G, Von Zerssen D: A comparison of two diagnostic methods: clinical ICD diagnoses vs DSM-III and Research Diagnostic Criteria using the Diagnostic Interview Schedule (Version 2). Arch Gen Psychiatry 1985; 42:677-684

- Robins LN, Helzer JE, Ratcliff KS, et al: Validity of the Diagnostic Interview Schedule, Version II: DSM-III diagnoses. Psychol Med 1982; 12:855–870
- Helzer JE, Robins LN, McEvoy LT, et al: A comparison of clinical and Diagnostic Interview Schedule diagnoses. Arch Gen Psychiatry 1985; 42:657-666
- Anthony JC, Folstein M, Romanoski AJ, et al: Comparison of the lay Diagnostic Interview Schedule and a standardized psychiatric diagnosis. Arch Gen Psychiatry 1985; 42:667-675
- chiatric diagnosis. Arch Gen Psychiatry 1985; 42:667-675

 14. Greist JH, Klein MH, Erdman HP, et al: Psychiatric diagnosis by direct patient computer interview. Hosp Community Psychiatry (in press)
- Braden W, Bannasch PR, Fink EB: Diagnosing mania: the use of family informants. J Clin Psychiatry 1980; 41:226–228
- Spitzer RL, Williams JBW: Revised diagnostic criteria and a new structured interview for diagnosing anxiety disorders. Psychiatry Res (in press)

Platelet MAO Activity in Geriatric Patients With Depression and Dementia

George S. Alexopoulos, M.D., Robert C. Young, M.D., Kenneth W. Lieberman, Ph.D., and Charles A. Shamoian, M.D., Ph.D.

The authors studied platelet MAO activity in psychiatrically hospitalized geriatric patients with depression and dementia. Platelet MAO activity was higher in demented patients with and without depression and in depressed patients with reversible dementia than in nondemented depressed patients. The data suggest that abnormally high platelet MAO activity may reflect a predisposition to the development of a dementia syndrome.

(Am J Psychiatry 1987; 144:1480-1483)

D epression and dementia are clinically related syndromes. Approximately 20% of psychiatric outpatients with a primary dementia syndrome have ma-

Received Aug. 27, 1985; revised Nov. 14, 1986, and March 2, 1987; accepted April 13, 1987. From the Department of Psychiatry, Westchester Division, the New York Hospital-Cornell Medical Center, Cornell University Medical College. Address reprint requests to Dr. Alexopoulos, Westchester Division, New York Hospital-Cornell Medical Center, 21 Bloomingdale Rd., White Plains, NY 10605.

Supported by the Link, Xerox, and Greenwall Foundation. The authors thank L. Waldhorn and L. Rowan for their contributions in data collection.

Copyright © 1987 American Psychiatric Association.

jor depression (1), and up to 50% of demented patients living in the community or in nursing homes have milder forms of depression (1-3). Studies of histopathologically confirmed cases of Alzheimer's dementia show that a considerable percentage had depressive symptoms (4-6). Of course, major depression also occurs in the elderly as a primary syndrome, and mild cognitive dysfunction is often part of this entity (7). In some cases the cognitive dysfunction in primary depression of late life is severe enough to meet criteria for dementia. This dementia syndrome is more frequent in geriatric patients, and it may remit with improvement of depression (8-10). These relationships between depression and dementia suggest that common pathophysiological abnormalities exist in these two disorders.

Monoamine oxidase (MAO) is an enzyme that catabolizes monoamines and participates in the regulation of intraneuronal levels of these brain neurotransmitters (11). Platelet MAO activity has been used as an indirect functional measure of monoaminergic neurotransmission (12–14). Conflicting data have been reported on the platelet MAO activity of patients of various ages with unipolar depression (15). We have observed that elderly women with unipolar depression have equivalent or lower platelet MAO activity than

normal subjects of similar age (16). Relatively high platelet (17, 18) and brain (17) MAO activity has been reported in patients with primary degenerative dementia. In this investigation, we studied platelet MAO activity in geriatric patients with depression and/or dementia to obtain information on the biological relationship between these two syndromes.

METHOD

Patients hospitalized in an acute geriatric psychiatric service were diagnosed by two psychiatrists using DSM-III criteria. Classification of subtypes of depression was made by Research Diagnostic Criteria (RDC) (19) after the Schedule for Affective Disorders and Schizophrenia (SADS) (20) had been administered. The 24-item Hamilton Rating Scale for Depression (21) was used to quantify depressive symptoms, and the Cognitive Capacity Screening Examination (22) was used to rate cognitive dysfunction. Patients who initially met criteria for major depression and dementia were classified as having "depression with reversible dementia" if their cognitive dysfunction improved by 4 or more points on the screening examination and if they achieved a total score of 24 or greater when symptoms of depression improved (change in Hamilton scale score of greater than 10 or a final score of less than 12); patients who still had a total screening examination score lower than 24 even after improvement of depression and met criteria for primary degenerative dementia were considered to have both disorders. The control group consisted of subjects who lived in the community and for whom psychiatric examination did not reveal psychiatric symptoms or a personal or family history of psychiatric disorders.

None of the subjects had a history of migraine, diabetes, cirrhosis, malignancies, epilepsy, or Huntington's chorea or a history and hematologic values suggestive of B₆ or iron deficiency, conditions that have been associated with abnormal platelet MAO activity (13, 23). Subjects receiving nitroglycerin, epinephrine, insulin, guanethidine, L-dopa, or MAO inhibitor were excluded. All subjects were free of neuroleptics, tricyclic antidepressants, or lithium for at least 10 days before blood sampling.

There were 115 patients in the patient group: 47 with primary major depression, 31 with primary degenerative dementia alone, 23 who met criteria for depression with reversible dementia, and 14 who had both major depression and primary degenerative dementia. The mean±SD age of the 115 patients was 74.1±7.6 years. There were 20 subjects in the control group; their mean±SD age was 73.6±4.8 years.

For the MAO assay, duplicate blood samples (7 ml each) were obtained in tubes containing acid-citrate dextrose between 8:00 a.m. and 10:00 a.m. All samples were coded, and clinical and laboratory staff were blind to each other's data. Blood was centrifuged in a swinging basket rotor at room temperature at 1100 g

for 4 minutes. The platelet-rich plasma was removed and recentrifuged at 1100 g for 20 minutes, which left a platelet button adherent to the glass. Duplicate platelet buttons prepared this way were stored at -20°C for up to 20 days. Platelet MAO activity was assayed with ¹⁴C-benzylamine (0.33 Ci/mol, 30.5 mM) as substrate by means of a modified version of the assay used by Bockar et al. (24). Reaction mixtures were incubated for 40 minutes at 37°C. The reaction was terminated by acidifying the incubation mixture, and metabolites were extracted by adding 6 ml of heptane and shaking the mixture for 10 minutes. After centrifugation for 5 minutes, 2-ml aliquots of the organic solvent were transferred to vials containing scintillation fluid and were counted. The counting efficiency was 95%. Under these conditions, the assay was linear; incubation time was up to 1 hour, and enzyme concentrations varied from 0.01 to 0.1 mg/ml of platelet protein. Protein concentration was measured by the Lowry method (25). Platelet MAO activity is expressed in nanomoles of ¹⁴C-benzylamine per hour per milligram of protein. The within-run variation determined in 12 identical samples obtained from a common pool ranged from 3% to 5%. The betweenrun variation has been determined by assaying in triplicate samples obtained from a common pool in conjunction with runs of other samples. The variation in platelet MAO activity of pooled samples (N=21)ranged from 5% to 7%.

The mean value of the two duplicated samples was used to characterize the platelet MAO activity of each subject. We used a one-way analysis of variance, the least significant difference test for comparison of means, a stepwise discriminant function analysis, and Pearson's product-moment correlation coefficient to analyze the data. Two-tailed significance levels are reported.

RESULTS

As shown in table 1, platelet MAO activity was unequally distributed among the five groups (F= 10.54, df=4, 130, p<.0001). Post hoc comparison of means (p=.05, least significant difference multiple comparison test) showed that the patients with depression alone had lower platelet MAO activity than the normal control subjects, that the patients with dementia alone had higher platelet MÂO activity than the normal control subjects, and that the patients with depression and dementia (primary or reversible) and those with primary degenerative dementia alone had higher platelet MÁO activity than the patients with depression alone (table 1). Differences in platelet MAO activity among the three groups of depressed patients (depression alone, depression and reversible dementia, and depression and degenerative dementia) could not be attributed to differences in severity or clinical manifestation of depression among the three groups. The total Hamilton scale scores were statistically in-

TABLE 1. Platelet MAO Activity in 115 Geriatric Patients With Major Depression and/or Dementia and in 20 Elderly Normal Control Subjects

	Platelet MAO Activity (nmol benzylamine/hr/mg proteir					
Diagnostic Group	Mean	SD				
Depression (N=47)	50.3	20.2				
Men (N=10)	48.7	18.1				
Women (N=37)	50.7	21.1				
Depression and degenerative						
dementia (N=14)	80.5	17.5				
Men (N=1)	105.3	0				
Women (N=13)	78.6	16.7				
Depression and reversible						
dementia (N=23)	69.3	23.8				
Men (N=3)	71.3	26.5				
Women (N=20)	69.0	24.1				
Degenerative dementia (N=31)	74.6	18.0				
Men (N=6)	60.7	20.4				
Women (N=25)	78.0	16.1				
Control subjects (N=20)	61.5	19.2				
Men (N=4)	43.7	9.9				
Women (N=16)	66.0	18.6				

distinguishable among the three groups of patients who met criteria for depression (means±SD: 29.4±7.1, 32.7±7.6, 33.1±8.0, respectively). Moreover, platelet MAO activity was similarly distributed among RDC subtypes of depression within each of the three groups. The patients with depression and degenerative dementia had higher platelet MAO activity than the normal control subjects. The patients with depression and reversible dementia also had higher platelet MAO activity than the normal control subjects, but the difference was not significant.

There were slight mean±SD age differences among the five groups. The patients with primary degenerative dementia alone (76.7±8.1 years), depression and primary degenerative dementia (74.2±6.3 years), and depression and reversible dementia (74.7 \pm 5.5 years) were slightly older than the patients with depression alone (72.0 \pm 8.0 years) and the normal control subjects (73.6±4.8 years). Platelet MAO activity correlated significantly with age in the normal control subjects (r=.58, df=18, p<.005); in each patient group, the correlation between age and platelet MAO activity was <.11. To evaluate further the effect of age on the differences in platelet MAO activity between the five groups, stepwise discriminant analysis was used. Age did not contribute significantly (F=1.38, df= 4, 130, p=.24) to the prediction of group membership made on the basis of platelet MAO activity alone.

It has been reported that platelet MAO activity differs between the sexes (23). To control for the effect of sex, we compared the values of women separately (table 1) and found a significant difference in platelet MAO activity among the five groups of women (F=9.18, df=4, 106, p<.0001). Post hoc comparison of means showed the same unequal distribution of platelet MAO activity among the individual groups of women as that described for the groups of men and women combined. There were not enough men for

similar comparisons. In a stepwise discriminant analysis, sex did not contribute significantly to the prediction of group membership made by the values of platelet MAO activity alone (F=.24, df=4, 130, p=.91).

DISCUSSION

We found higher platelet MAO activity in the geriatric patients who met criteria for primary degenerative dementia than in the elderly depressed patients without dementia. The presence or absence of depression did not influence platelet MAO activity significantly in the patients with primary degenerative dementia. Platelet MAO activity was higher in the depressed patients with reversible dementia than in the patients with depression alone and similar to that of the patients with primary degenerative dementia alone. High platelet MAO activity appeared, therefore, to be a common finding among patients who had dementia, regardless of whether the dementia syndrome developed transiently, during an episode of depression, or as part of primary degenerative dementia. Abnormally high platelet MAO activity has been reported in degenerative dementing disorders, such as Huntington's chorea (14), and in primary degenerative dementia (14, 17, 18) and may, therefore, be associated with a predisposition to the development of a dementia syndrome regardless of the underlying disease.

With aging, platelet and brain MAO activity increases (12, 23) and brain monoamine neurotransmitters decline (26). These age-related changes are more pronounced in patients with primary degenerative dementia (26). Reversible dementia develops more frequently in elderly than in younger depressed patients (8–10). Therefore, individuals with extreme age-related elevation of platelet MAO activity may be predisposed to developing a transient dementia syndrome when they become depressed.

Some elderly depressed patients with reversible dementia may have abnormally high platelet MAO activity as part of an underlying organic dementing process. In these patients, the dementia syndrome appears transiently, i.e., only when the pathophysiological changes of depression occur. Higher platelet MAO activity has been observed in primary degenerative dementia patients who have CAT scan evidence of brain atrophy than in demented subjects without substantial brain atrophy (27). It is, therefore, likely that platelet MAO activity reflects a functional aspect of the degenerative process.

The two most important limitations of this study are the small number of male subjects and the relatively brief drug washout period. In the elderly population, women outnumber men. Geriatric male patients are more often physically ill and require more drug treatment than geriatric women, which further limits the number of male subjects available for study. The use of discriminant analysis in this study showed that group differences exist even when the effect of sex on platelet MAO activity is considered. The findings, however, need to be replicated in a larger sample of men.

In this investigation, elderly depressed patients with reversible dementia and depressed patients with primary degenerative dementia had higher platelet activity than depressed nondemented patients of comparable age. These differences cannot be attributed to unequal distribution of clinical symptoms among the three groups. This finding is of limited usefulness in the differential diagnosis of depression and dementia because the distribution of platelet MAO activity is wide in each of the three groups. Furthermore, since depressed patients with reversible dementia and patients with primary degenerative dementia have indistinguishable platelet MAO activity, this enzymatic measure may not be clinically useful in predicting the outcome of dementia.

- 1. Reifler BV, Larson E, Hanley R: Coexistence of cognitive impairment and depression in geriatric outpatients. Am J Psychiatry 1982; 139:623-626
- 2. Miller NE: The measurement of mood in senile brain disease: examiner ratings and self-reports, in Psychopathology of the Aged. Edited by Cole JO, Barrett JE. New York, Raven Press,
- 3. Ernst P, Badash D, Beran B, et al: Incidence of mental illness in the aged: unmasking the effects of diagnosis of chronic brain syndrome. J Am Geriatr Soc 1977; 8:371-375
- Sim M, Sussman I: Alzheimer's disease: its natural history and differential diagnosis. J Nerv Ment Dis 1965; 135:489-499
- Coblentz JM, Mattis S, Zingesser LH, et al: Presenile dementia. Arch Neurol 1973; 29:299-308
- 6. Rosen WG, Terry RD, Fuld PA, et al: Pathological verification of ischemic score in differentiation of dementias. Ann Neurol 1979; 7:486-488
- 7. Sternberg DF, Jarvik ME: Memory functions in depression. Arch Gen Psychiatry 1976; 33:219-224
- Folstein MF, McHugh PM: Dementia syndrome of depression, in Alzheimer's Disease, Senile Dementia and Related Disorders: Aging, vol 7. Edited by Katzman R, Terry RD, Bick KL. New York, Raven Press, 1978
- 9. Post F: Diagnosis of depression in geriatric patients and treatment modalities appropriate for the population, in Depression: Behavioral, Biochemical, Diagnosis, and Treatment Concepts. Edited by Gallant DM, Simpson GM. New York, Spectrum Publications, 1975
- 10. Rabins PV, Merchant A, Nedstadt G: Criteria for diagnosing

- reversible dementia caused by depression: validation by a 2-year follow-up. Br J Psychiatry 1984; 144:488-492
- 11. Kopin J: Storage and metabolism of catecholamines: the role of monoamine oxidase. Pharmacol Rev 1964; 16:179-191
- 12. Robinson DS, Nies A, Davis JN, et al: Aging, monoamines and monoamine oxidase levels. Lancet 1972; 1:290-291
- 13. Fowler CJ, Tipton KF, MacKay AVP, et al: Human platelet monoamine oxidase—a useful enzyme in the study of psychiatric disorders? Neuroscience 1982; 7:1577-1594
- 14. Sandler M, Reveley MA, Glover V: Human platelet monoamine oxidase activity in health and disease: a review. J Clin Pathol 1981; 34:292-302
- 15. Marbach M, Diebold K, Friedl W, et al: Platelet MAC activity in patients with affective psychosis and their first-degree relatives. Pharmacopsychiatry 1981; 14:87-93
- 16. Alexopoulos GS, Lieberman KW, Young RC, et al: Platelet MAO activity and age at onset of depression in elderly depressed women. Am J Psychiatry 1984; 141:1276-1278
- 17. Adolfsson R, Gottfries CG, Oreland L, et al: Increased activity of brain and platelet monoamine oxidase in dementia of Alzheimer's type. Life Sci 1980; 27:1029-1034
- 18. Alexopoulos GS, Lieberman KW, Young RC: Platelet MAO activity in primary degenerative dementia. Am J P,ychiatry 1984; 141:97–99
- 19. Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria for a Selected Group of Functional Disorders, 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1977
- 20. Spitzer RL, Endicott J: Schedule for Affective Disorders and Schizophrenia (SADS), 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1977
- 21. Hamilton M: A rating scale for depression. J Neurol Neurosurg
- Psychiatry 1960; 23:56-62 22. Jacobs JW, Bernhardt MR, Delgado A, et al: Screening for organic mental syndromes in the medically ill. Ann Intern Med 1977; 86:40-46
- 23. Robinson DS, Nies A: Demographic, biologic and other variables affecting monoamine oxidase activity. Schizophr Bull 1980; 6:298-307
- 24. Bockar J, Roth R, Heninger G: Increased human platelet monoamine oxidase during lithium carbonate therapy. Life Sci 1974; 15:2109-2118
- 25. Lowry OH, Rosebrough NJ, Farr AL, et al: Protein measurement with the folin phenol reagent. J Biol Chem 1951; 193: 265-275
- 26. Adolfsson K, Gottfries CG, Oreland L, et al: Reduced levels of catecholamines in the brain and increased activity of monoamine oxidase in platelets in Alzheimer's disease: therapeutic implications, in Alzheimer's Disease, Senile Dementia and Related Disorders: Aging, vol 7. Edited by Katzman R, Terry RD, Bick KL. New York, Raven Press, 1978
- Young RC, Alexopoulos GS, Lieberman KW, et al: Platelet MAO and CT atrophy in degenerative dementia, in New Research Abstracts, 138th Annual Meeting of the American Psychiatric Association. Washington, DC, APA, 1985

The Use of *DSM-III* Axis III in Recording Physical Illness in Psychiatric Patients

Robert Maricle, M.D., Paul Leung, M.D., and Joseph D. Bloom, M.D.

The randomly selected charts of 50 discharged psychiatric inpatients were reviewed for documentation of medical illness and DSM-III axis III diagnoses. Twenty-eight percent of the patients had had medical symptoms, 56% had had medical findings, 36% had had laboratory findings, and 60% had been given axis III diagnoses. In at least seven cases, the medical findings were poorly reflected in the final axis III diagnosis. In no case did the record indicate that medical factors were viewed as the cause of a patient's immediate psychiatric syndrome. (Am J Psychiatry 1987; 144:1484–1486)

In the 7 years since its publication, DSM-III appears to have enjoyed broad acceptance as a unifying, practical, and valid system of psychiatric diagnosis. Empirical and clinical correlates of axis I and axis II diagnoses, such as response to treatment and various biological measurements, appear regularly in the literature. If each of the five axes of DSM-III were viewed by psychiatrists as equally important in their work with patients, many published reports that examine the merits of DSM-III diagnoses would focus on, or at least include, axis III; this is distinctly not the case. Despite widespread acceptance of DSM-III, reports that mention axis III more than tangentially are rare.

Axis III serves to formally acknowledge concomitant medical conditions in individuals with psychiatric disorders and to promote the integration of medical factors within a comprehensive psychiatric formulation and treatment plan. Another application of axis III is to delineate medical conditions judged to cause or exacerbate an associated psychiatric syndrome: "somatopsychic disorders" (1). In both areas, a substantial data base, generated largely from academic settings, documents the prevalence and significance of medical illness in psychiatric patients (2). Still, clinical use of axis III has seldom been directly examined.

Received Feb. 24, 1986; revised Nov. 17, 1986, and April 1, 1987; accepted April 28, 1987. From the Department of Psychiatry, Oregon Health Sciences University. Address reprint requests to Dr. Maricle, Department of Psychiatry, Oregon Health Sciences University, 3181 Southwest Sam Jackson Park Rd., Portland, OR 97201.

Supported by Junior Faculty Development Award MH-17255 from NIMH to Dr. Maricle.

Copyright © 1987 American Psychiatric Association.

A large percentage of the psychiatric treatment of the seriously mentally ill in the United States occurs in public facilities, where the pressures, priorities, and resources differ from those in research environments. Accordingly, the purpose of this investigation was to examine the clinical use of axis III in a nonacademic setting. We chose frequency of axis III chart entries and their concordance with the medical data base as measurable variables for beginning to quantify the use of axis III. In addition, we took note of the various types of medical conditions that had been recorded and sought evidence of somatopsychic formulations.

METHOD

Fifty charts were randomly selected from a pool of discharges from a 350-bed state hospital that serves the general psychiatric needs of western Oregon, which contains 80% of the state's population. The medical staff consists of 18 physicians; two are in administrative and supervisory clinical positions, two are psychiatric residents from a nearby university training program who are in their second postgraduate year, and 14 are full-time staff physicians. Excluding the residents, all but two physicians had completed psychiatric training programs. During the year of the study, there were 2,098 admissions and 2,039 discharges. The hospital is accredited by the Joint Commission for the Accreditation of Hospitals and certified by the Health Care Financing Administration; thus, it complies with a body of common clinical monitoring and auditing procedures.

According to medical staff policy and medical record review procedures at the facility, each chart is expected to include documentation of the patient's psychiatric and general medical history, mental status examination, physical examination, and screening laboratory studies. At discharge, the treating physician prepares a discharge summary that, again by hospital policy, is expected to comply with the multiaxial *DSM-III* format and diagnostic categories.

We reviewed charts of psychiatric inpatients and examined recorded measures and interrelationships of five variables: 1) physical symptoms, 2) positive findings on physical examination, 3) recorded abnormalities in laboratory test results, 4) results of other medical diagnostic tests, and 5) final axis III diagnoses.

RESULTS

Thirty-three (66%) of the patients were male, and 17 (34%) were female. The mean \pm SD age of the sample was 36.6 ± 11.7 years (range =21-67 years). Length of hospitalization averaged 40.8 ± 57.4 days, with a range of 1-287 days.

Diagnoses along axes I and II usually, but not always, conformed to DSM-III categories. Forty-eight individuals received 58 axis I diagnoses; in cases where there was more than one diagnosis, a substance abuse diagnosis was most often present. Seventeen (34%) of the patients were schizophrenic, four (8%) had schizoaffective disorder, and 12 (24%) had major affective disorders, of which seven (14%) were bipolar and five (10%) were unipolar. Fifteen patients (30%) had a substance abuse disorder: six (12%) alcohol abuse, four (8%) drug abuse, and five (10%) both alcohol and drug abuse. Seven patients (14%) had the diagnosis of adjustment disorder. Two patients insisted on discharge before a reliable diagnosis could be established. Three patients who did not fit in the categories we have mentioned had diagnoses of mental retardation, organic hallucinosis, and transsexualism. Eighteen patients (36%) received an axis II diagnosis in addition to their axis I diagnosis.

On admission, the records of 14 (28%) of the patients cited at least one physical complaint or symptom unexplained by the provisional psychiatric diagnosis. These included angina, lacerations, diabetes, cough, leg pain, weight loss, fecal incontinence, back pain, stomach cramps, foot blister, and tremor. Eight records (16%) indicated more than one physical complaint. In the remaining 36 patients (72%), no physical symptoms were noted at the time of admission.

By counting all abnormalities that were noted, no matter how trivial, we found that 28 (56%) of the patients had positive physical findings recorded on examination. These included tachycardia, obesity, foot blister, heart murmur, hepatomegaly, hypertension, tachypnea, vaginal discharge, Korsakoff's sign, hyporeflexia, tremor, small' testes, psoriasis, facial deformity (associated with a gunshot wound), cataract, piloerection, flushing, and dysmetria. Valid judgments about clinical significance were difficult to infer from the records because of lack of detail, but it did not appear that these findings were viewed as highly significant clinically.

The laboratory screening battery at the time of the study consisted of a CBC with differential, urinalysis, and serology for syphilis. Eighteen (36%) of the patients had an abnormality on one or more of these measures. Many abnormalities were at the borderline of the normal range. Twenty-six (58%) of the patients underwent laboratory or radiographic testing in addition to the routine work. Generally, this consisted of the SMA-12, determination of serum thyroxine level or lithium level, or a radiograph of a traumatized or painful area of the body. Laboratory abnormalities included monocytosis, eosinophilia, pyuria, hypergly-

cemia, leukocytosis, elevated levels in liver function tests, hematuria, albuminuria, polycythemia, abnormal Pap smear, and positive gonorrhea culture.

Thirty (60%) of the patients had a recorded axis III diagnosis. Many times this was simply a reiteration of noted symptoms or findings (e.g., "hand in a cast," angina, foot blister, obesity, laceration, or multiple somatic complaints). In other cases, a syndrome name was used to denote one or more findings (e.g., gastritis, alcoholic hepatitis, peptic ulcer disease, psoriasis, a prior history of endocarditis, and drug-induced parkinsonism).

We did not find statistically significant relationships between the presence or absence of an axis III diagnosis and a patient's age (t=1.08, df=48, p=.30), sex $(\chi^2=0.02, df=1, p=.89)$, length of hospital zation (t=0.09, df=48, p=.94), presence of physical abnormalities ($\chi^2=1.68$, df=1, p=.19), or use of additional laboratory or medical diagnostic procedures ($\chi^2 = 1.27$, df=1, p=.26). All patients with physical symptoms recorded at admission ultimately received axis III diagnoses; 56% of those without physical symptoms received them (p=.005, Fisher's exact test). This finding was identical for patients with respect to the presence or absence of a prior medical history. Patients without the axis I diagnosis of schizophrenia were more likely to have an axis III diagnosis ($\chi^2=3.74$, df=1, p=.05), but cell sizes were too small to specify particular nonschizophrenic diagnoses. Presence or absence of an axis II diagnosis in a patient was not associated with having an axis III diagnosis ($\chi^2 = 1.21$, df=1, p=.27).

While no somatopsychic formulations or intimations thereof were found in the discharge summaries, three patients had organic diagnoses on axis I: mental retardation (N=1) and organic hallucinosis (N=2). Each had an axis III diagnosis: foot blister for two and obesity for the other. These physical problems obviously were not represented as being somatopsychic in nature or as having particular clinical significance. No more than six patients (12%) had axis III diagnoses of syndromes that accurately reflected abnormal physical findings and laboratory values. These appeared remotely related to the psychiatric syndrome at best. In seven cases (14%), the lack of correspondence between physical findings and the axis III diagnosis was notable (see table 1).

DISCUSSION

We set out to examine the use of axis III in a sample of patients and assumed that the nature of its use might be inferred from the frequency of axis III diagnoses, the kinds of diagnoses that were cited, and their relationship to the medical data base. What we found corresponds to the lack of attention given axis III in the literature; that is, while axis III is used frequently, the manner of use implies that psychiatrists often undervalue its importance.

TABLE 1. Medical Findings and Discordant Axis III Diagnoses Given to Seven Psychiatric Patients

Patient	Medical Findings	DSM-III Axis III Diagnosis
1	Tachycardia, heart murmur, hepatomegaly	Abnormal Pap smear
2	Fecal incontinence	Obesity
3	Tachycardia, laboratory evidence of cholestasis	Gastritis
4	Laceration, pyuria, hematuria	None
5	Hypertension, polycythemia	Spinal deformity
6	Tremor, stomach cramps, flushing, piloerection, dysmetria	Prior history of endocarditis
7	Hematuria, pyuria	Peptic ulcer disease

Findings of medical problems were prevalent in this sample of state hospital patients, whether measured by symptoms (28%), physical signs (56%), laboratory findings (36%), or the frequency of entries on axis III at discharge (60%). A 28%-60% rate is consistent with reports from research and academic facilities that show a substantial prevalence of physical illness in psychiatric patients. For instance, when we combined the results of seven reports in the literature on inpatients (3-9), the weighted prevalence was 37% among 1,566 patients. For outpatients from seven reports (9– 15), the weighted prevalence was 38% among 3,613 patients.

However, a major discrepancy exists between the absence of somatopsychic conditions in our sample and findings for patients in other settings. In no case did a discharge diagnosis show that a treating physician thought medical factors had caused or exacerbated either the psychiatric syndrome in question or the ultimate need for psychiatric treatment. In three reports (4, 5, 16) in which authors made an attempt to make a judgment about cause, the frequency of medical illnesses judged either to have caused or to have exacerbated a psychiatric condition was 29% for 488 hospitalized patients. In three reports on outpatients (10, 12, 17), 15% of 827 patients were judged to have psychiatric symptoms as the result of medical illnesses.

In the present study, the lack of logical correspondence between final axis III diagnoses and the associated medical data base raises major questions about the accuracy and/or value of these diagnoses. The three organic axis I diagnoses were certainly no better specified by the axis III diagnoses for these conditions. Seven axis III diagnoses suggested there had been casual record keeping or cursory attention to medical thinking at best. Unexpectedly, age, physical examination findings, laboratory value abnormalities, and performance of additional diagnostic studies were not associated with a patient's receiving an axis III diagnosis. Rather, physical symptoms recorded at admission and notation of a history of medical problems were the factors most associated with the assigning of an axis III diagnosis.

CONCLUSIONS

If frequency of recording were the solitary criterion for the clinical utility of axis III, then our data superficially demonstrated evidence of such utility. However, despite the abundance of abnormal medical findings in the record, no more than 12% of the charts included axis III diagnoses of syndromes clearly elucidated by physical examination findings or laboratory evidence. Further, in no cases were medical factors cited in the axis III diagnoses considered to be necessary to understand the psychiatric condition. Particularly striking were the cases in which axis III diagnoses failed to reflect actual medical findings.

Retrospective studies based solely on chart review from busy clinical settings are at risk for accentuating incongruities within the medical record. Still, inconsistencies in this sample of charts suggested that some psychiatrists have recorded axis III diagnoses in a perfunctory manner, implying that they have also perceived axis III to be of little clinical value. We recommend that future researchers investigate the generalizability of our findings to other settings and include an analysis of clinicians' perceptions of the value of axis III.

- 1. Hall RCW (ed): Psychiatric Presentations of Medical Illness: Somatopsychic Disease. New York, Spectrum, 1980
- Ananth J: Physical illness and psychiatric disorders. Compr Psychiatry 1984; 25:586-593
- 3. Phillips RJ: Physical disorders in 164 consecutive admissions to a mental hospital: the incidence and significance. Br Med J 1937; 2:363-366
- 4. Marshall HES: Incidence of physical disorders among psychiatric inpatients. Br Med J 1949; 2:468-470
- 5. Herridge CF: Physical disorders in psychiatric illness: a study of 209 consecutive admissions. Lancet 1960; 2:949-951
- 6. McGuire GP, Granville-Grossman KL: Physical illness in psychiatric patients. Br J Psychiatry 1968; 114:1365-1369
- 7. Johnson DAW: The evaluation of routine physical examinations in psychiatric cases. Practitioner 1968; 200:686-691
- Burke AW: Physical illness in psychiatric hospital patients in Jamaica. Br J Psychiatry 1972; 121:321-322
 Karasu TB, Waltzman SA, Lindenmayer J-P, et al: The medical
- care of patients with psychiatric illness. Hosp Community Psychiatry 1980; 31:463-472
- 10. Koryani EK: Physical health and illness in a psychiatric outpatient department population. Can Psychiatr Assoc J 1972; 17(suppl 2):109-116
- 11. Koryani EK: Morbidity and rate of undiagnosed physical illnesses in a psychiatric clinic population. Arch Gen Psychiatry 1979; 36:414-419
- 12. Davies SW: Physical illness in psychiatric outpatients. Br J Psychiatry 1965; 111:27-33
- 13. Burke AW: Physical disorders among day hospital patients. Br
- J Psychiatry 1978; 133:22–27

 14. Muecke LN, Krueger DW: Physical findings in a psychiatric outpatient clinic. Am J Psychiatry 1981; 138:1241-1242
- 15. Barnes RF, Mason JC, Greer C, et al: Medical illness in chronic osychiatric outpatients: Gen Hosp Psychiatry 1983; 5:191-195
- 16. Hall RCW, Gardner ER, Stickney SK, et al: Physical illness manifesting as psychiatric disease. Arch Gen Psychiatry 1980; 37:989-995
- 17. Hall RCW, Popkin MK, Devaul RA, et al: Physical illness presenting as psychiatric disease. Arch Gen Psychiatry 1978; 35:1315-1320

Effects of Sugar and Aspartame on Aggression and Activity in Children

Markus J.P. Kruesi, M.D., Judith L. Rapoport, M.D., E. Mark Cummings, Ph.D., Carol J. Berg, M.A., Deborah R. Ismond, M.A., Martine Flament, M.D., Marian Yarrow, Ph.D., and Carolyn Zahn-Waxler, Ph.D.

Habitual sugar consumption and behavior following challenge by sugar and aspartame were studied in 30 preschool boys. The 18 subjects whose parents considered them sugar reactive had more disruptive behavior problems at baseline than the other 12 subjects. Habitual sugar consumption correlated only with duration of aggression against property in alleged responders. Double-blind crossover challenges with aspartame, saccharin, sucrose, and glucose produced no significant effect on aggression or observers' ratings of behavior. Lower actometer counts followed the trials of aspartame, but the difference was not apparent to observers. It is unlikely that sugar and aspartame are clinically significant causes of disruptive behavior. (Am J Psychiatry 1987; 144:1487–1490)

S everal studies of adult patients and violent of-fenders have suggested that ingestion of sugar or forms of abnormal glucose metabolism (hypoglycemic response to glucose tolerance testing, increased insulin secretion, or carbohydrate craving) may be linked to destructive, aggressive behaviors (1, 2) or interpersonal aggression (3-6). Dietary carbohydrate ingestion was reported to be significantly correlated with destructive-aggressive behavior and motor activity in preschool children (7). In spite of numerous studies of sugar challenge and behavior in children which have produced negative results (8-13), we felt that an additional study was warranted because aggression had not been studied. Preschool children were an ideal population to test because of the relatively high frequency of aggressive behavior and the ease with which it can be induced in that age group. (Infrequent occurrence of aggressive behavior makes study difficult in older populations.)

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received Feb. 11, 1986; revised Sept. 3 and Dec. 29, 1986; accepted May 7, 1987. From the Child Psychiatry Branch and the Laboratory of Developmental Psychology, NIMH. Address reprint requests to Dr. Kruesi, Child Psychiatry Branch, 9000 Rockville Pike, Bldg. 10, Rm. 6N240, Bethesda, MD 20892.

The authors thank E. Bou, R.D., and G. Stables, R.D., for collection of the diet diary data.

Blind challenges studied in both the laboratory and the home provided more precise measurement of behaviors as well as naturalistic observations in the setting where the problem of behavioral response to sugar was first defined. We used two "control" substances, since saccharin, which does not affect behavior, is not an ideal taste match for sugars and aspartame, which does provide a better taste match, is currently under investigation for its possible behavioral effects because altered central serotonergic functions have been seen in animal studies (14). Finally, careful clinical delineation of alleged sugar-responsive children has not yet been reported.

Preschool children were studied in both laboratory and home settings. Some of the children had a history of aggressive behavior in response to sugars; laboratory challenges were designed to facilitate the study of aggressive behavior. All subjects received four challenges: glucose, sucrose, saccharin, and asparame.

METHOD

Local newspapers and schools were used to recruit "sugar-responsive" boys (N=14), ages 2-6 years, whose parents reported a history of behavioral change following ingestion of sugar and/or improvement in behavior following restriction of sugar. For each of these boys, a familiar male playmate was then recruited without regard to responder status. Among the 14 playmates recruited, four were reported to be "responders" and were switched into the "sugarresponsive" group, leaving 10 boys in the playmate group. The parents of one additional boy responded to the recruitment effort for "sugar-responsive" children; however, their son was not "sugar responsive" and was thus placed in the playmate group along with his playmate, who was also not "sugar responsive." As a result, the final group of "sugar responders" included 18 boys, and the final group of playmates included 12 boys. Exclusion criteria included seizure disorder, diabetes, phenylketonuria, or any other medical disorder.

Parents of "sugar responders" reported that the onset of behavior change occurred within 75 minutes of ingestion of sugar. No history of behavioral reaction to aspartame was reported. Children and parents

received an explanation of the study, and consent was obtained from both.

Baseline measures included a structured interview with the mothers about their sons' behavior (behavior screening questionnaire [15]) and behavior rating scales (16-18) that the mothers completed for their children. Ratings were also obtained from preschool teachers when such ratings were available (19). Diagnoses, based on review of clinical data as well as observation, were made by two child psychiatrists (one of whom was M.J.P.K.). Among the responders, diagnoses included attention deficit disorder with hyperactivity (N=4), oppositional disorder (N=2), conduct disorder (N=2), adjustment disorder with disturbance of conduct (N=1), and separation anxiety disorder (N=1). Eight of the responders had no diagnosis. Among the playmates, 11 had no diagnosis, and one had a diagnosis of borderline intellectual functioning.

Seven-day diaries of habitual dietary intake were collected from each subject and analyzed for protein, carbohydrates, calories, aspartame, sucrose, and other sugars, as described elsewhere (20).

In the laboratory portions of the study, we used a randomized double-blind design to give the children single doses of sucrose, 1.75 g/kg; glucose, 1.75 g/kg; aspartame, 30 mg/kg; or saccharin in a lemon-flavored carbonated drink on 4 separate challenge days, with a 5–7-day washout between challenges. Responders and their familiar playmates were tested in pairs. The sweeteners were administered at the beginning of 2-hour laboratory playroom sessions at NIMH and again on 4 separate days in home settings within 2–4 days of the NIMH challenges.

Laboratory challenges took place in a playroom containing a small table, chairs, a toy that could be ridden, and miscellaneous toys and games. The first 90 minutes of "free play" included 11 minutes of staged arguments and friendly conversations by trained research assistants. After 90 minutes the boys sat at the table for 15 minutes of story time followed by individual placement in a standard object-conflict situation (described elsewhere [21]).

Thirty minutes of each boy's behavior were videotaped, and pairs of trained observers who were blind to the challenge substance rated these for duration of interpersonal aggression (physical attempts to take another's possessions or attacking others) and aggression against property (destructive behavior such as attempts to damage toys or room furnishings). The latter was analogous to the destructive-aggressive behaviors reported to be correlated with sugar intake (7). The intraclass correlation coefficient of reliability (22) between the pairs of raters for duration of aggression against property was .94 (p<.0001); for duration of interpersonal aggression it was .72 (p<.0001).

Motor activity was measured by an accelerationsensitive device (actometer) with a solid-state memory (23) worn on a belt around the child's waist. Results were expressed in total counts for the 2 hours after ingestion of the sweetened drink.

TABLE 1. Characteristics of 18 Children Thought To Be Sugar Responders and 12 of Their Playmates

	"Su Respon		Playmates		
Initial Evaluation Measure	Mean	SD	Mean	SD	
Age (months)	51.4	13.6	51.3	14.6	
Weight (kg)	18.3	3.4	17.5	3.5	
Socioeconomic status (26)	1.7	1.7	1.1	0.3	
General cognitive index (27)	105.5	11.2	108.7	18.1	
Behavior screening question-					
naire (15) total score ^a	9.4	3.3	5.5	2.2	
Baseline Conners 10-item scale					
(16) score (parent) ^b	9.7	6.1	3.3	2.8	
Baseline Conners 48-item scale					
(17) score (parent)					
Factor I (conduct) ^c	0.65	0.42	0.27	0.35	
Factor IV (hyperactivity) ^d	1.33	0.80	0.52	0.41	
Child Behavior Checklist (18)					
score					
Internalizing	51.9	11.1	46.3	9.2	
Externalizing ^e	59.0	9.9	45.3	10.7	
Conners 39-item scale (19)					
score (teacher) ^f					
Factor I (conduct)	0.23	0.32	0.09	0.14	
Factor IV (hyperactivity) ^g	0.95	0.55	0.36	0.36	

a Significant difference between groups (t=-3.57, df=28, p=.001, two-tailed unpaired t test).

bSignificant difference between groups (t=-3.87, df=25.7, p=.001, two-tailed unpaired t test).

cSignificant difference between groups (t=-2.60, df=28, p=.015, two-tailed unpaired t test).

dSignificant difference between groups (t=-3.21, df=28, p=.001, two-tailed unpaired t test).

^eSignificant difference between groups (t=-2.77, df=16, p=.014, two-tailed unpaired t test).

^fN=14 for responders; N=6 for playmates.

gSignificant difference between groups (t=-2.40, df=18, p=.028, two-tailed unpaired t test).

A playroom "teacher" used Conners 10-item scale (16) to rate impulsive, restless, and inattentive behaviors. Parents also completed the same scale on laboratory challenge days for the child's waking hours after the visit to NIMH in order to detect delayed effects.

In the home challenges, parents used the Conners' 10-item scale, with two items added for evaluation of destructiveness and aggression, to rate behavior hourly during the 5 hours after ingestion of the drink. They also guessed whether the drink contained a sugar.

The alleged sugar responders and the playmates without responder histories were compared on all baseline measures by t test for independent samples. Two-way analysis of variance with repeated measures, using responder status as a grouping factor for all four substances, was performed on all measures. Conservative degrees of freedom were used, with the Greenhouse and Geiser correction (24). Significant main effects were tested by means of the Bonferroni correction (25) for multiple comparisons.

Pearson product-moment correlations were calculated between mean daily sucrose consumption, total sugar consumption, carbohydrate/protein ratio, and behavioral measures for the responders and for the group as a whole.

TABLE 2. Results of Sweetener Challenges for 18 Children Thought To Be Sugar Responders and 12 of Their Playmates

Subsection	Conners Scale (16 (playre "teach) Score oom	Conners : Scale (16 (rest of parer) Score day,	Acton 2-Hour Cour	Total	Total Du of Interpo Aggres (log corr (secon	ersonal sion ected)	Total Du of Aggr Against P (log corn (secon	ession roperty rected)	12-I Scale I (5-hour chale	Score home
Substance and Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Glucose		•										
Responders	2.1	7.0	8.5	6.7	557	163	3.6	2.0	2.9	1.6	27.0	31.3
Playmates	3.6	5.4	2.3	3.5	550	179	3.1	2.4	2.2	1.8	11.4	19.0
Sucrose												
Responders	7.4	8.5	9.2	9.0	586	134	3.9	1.7	2.9	2.2	31.4	32.6
Playmates	5.3	5.7	2.5	3.4	499	169	3.2	2.2	1.4	1.8	6.3	8.4
Saccharin												
Responders	7.1	8.3	8.7	7.8	559	199	3.9	1.4	3.2	2.1	30.5	30.5
Playmates	4.4	7.3	3.0	4.5	495	157	3.2	1.7	2.0	2.3	7.3	13.4
Aspartame												
Responders	5.1	5.2	9.2	7.7	492	144	3.0	1.3	2.6	1.8	31.3	23.1
Playmates	2.3	2.5	2.5	2.9	397	116	2.3	1.7	1.8	2.0	9.2	10.5

Significant main effect of group (F=15.5, df=1, 26, p=.001).

RESULTS

On the baseline measures, responders and playmates did not differ in terms of age, weight, socioeconomic status (26), and general cognitive index (an intelligence estimate [27]) (see table 1). The "sugar-responsive" children were more behaviorally disturbed, as indicated by the frequency of psychiatric diagnosis ($p \le .01$, Fisher's exact test), higher hyperactivity ratings by teachers and parents, and higher behavior screening questionnaire scores (28).

Playroom behavioral measures during the four challenge sessions are shown in table 2. Observer ("teacher") ratings of hyperactivity showed no significant main effects of substance or interactions between substance and group. Parent ratings of behavior for the remainder of the challenge day revealed no substance effect but were consistent with baseline group differences.

A significant main effect of substance on motor activity was seen. Subsequently, the six possible pairwise comparisons of activity following ingestion of sweeteners were assessed by Bonferroni-corrected t tests. There was significantly less activity following ingestion of aspartame than following glucose (t= 3.33, df=78, p \leq .01) and sucrose (t=3.23, df=78, p≤05), and there was a trend for less activity following aspartame than following saccharin (t=2.65, df=78, p≤.06). Comparisons between saccharin and each sugar were not significant.

Duration of aggression against property and interpersonal aggression were not significantly affected by substance, nor did they differ by group, even though total duration of interpersonal aggression appeared to decrease following ingestion of aspartame. Time measurements were log corrected before analysis.

For the home challenges, parent ratings of activity

and aggression failed to show differences between substances for either group. Consistent with baseline measures, parents rated responders more hyperactive than children who were not believed to be sugar reactive. No parent was able to correctly differentiate between the sugar and nonsugar conditions.

According to the diet diaries, neither the carbohydrate/protein ratio nor sucrose consumption differed significantly between the responders and their peers (20). Only two of 51 correlations were significant. Sugar consumption, measured both as mean daily sucrose intake and as total sugar, correlated with duration of aggression against property across the four sessions for responders (r=.60, p=.03, and r=.72, p=.005, respectively) but not for the group as ε whole (r=.09, n.s., and r=.35, n.s., respectively). However, as only two of 51 correlations were significant, these may have occurred by chance.

DISCUSSION

This study tried to elicit the effects of sugar on behavior by specifically recruiting alleged responders and selecting an age group for which correlations had been originally reported. Previous studies (8, 9, 11–13, 29, 30) did not use parent reports for recruitment, and they did not use the person who gave the child's history as a rater. The present study included all these conditions without indication of significant bel-avioral effects from sugar ingestion.

We considered the possibility that the significant effect of substance on activity might represent an increase in activity after ingestion of the sugars. However, actometer counts after ingestion of saccharin were not significantly different from those after either sugar. A clear trend for less activity after as artame

bSignificant main effect of substance (F=5.20, df=3, 78, p=.006). Significant main effect of substance (F=2.8, df=3, 78, p=.06).

dConners 10-item scale (16) plus two items for evaluation of destructiveness and aggression.

^cSignificant main effect of group (F=11.5, df=1, 28, p=.002).

than after saccharin was present, suggesting that aspartame was the disparate compound of the four. Lack of a significant increase in motor activity following an acute sugar challenge is consistent with most (8–13) but not all (29, 30) reports.

Relative decreases in motor activity and interpersonal aggression following aspartame, if they were "real" and did not occur by chance, seemed of little clinical importance, since observers were unable to discern differences in behavioral effects between substances. Studies using lower doses of aspartame (≤10 mg/kg) have reported varied findings: no behavioral change (8, 9, 13), increased activity (12), and decreased activity (29). Phenylalanine, an aspartame constituent, failed to alter rater-observed hyperactivity (31) or to ameliorate attention deficit disorder, residual type (32). Preweaning tests in rats demonstrated decreased locomotion only when aspartame was 6% of the diet (33).

Only one of the original correlations between habitual diet and behavior that has been reported was confirmed, despite our search for multiple correlations. Similarly, Wolraich et al. (34) did not find consistent diet-behavior relationships.

In summary, acute sugar loading did not increase aggression or activity in preschool children. Behavioral effects of aspartame were either extremely subtle or absent. "Sugar-responsive" children may represent a group with chronic behavioral disturbance for whom families are searching for understanding and help.

- Virkkunen M: Reactive hypoglycemic tendency among arsonists. Acta Psychiatr Scand 1984; 69:445

 –452
- Kruesi MJP, Linnoila M, Rapoport JL, et al: Carbohydrate craving, conduct disorder, and low 5-HIAA. Psychiatry Res 1985; 16:83–86
- Bolton R: The hypoglycemia-aggression hypothesis: debate vs research. Current Anthropology 1984; 25:1-53
- Virkkunen M: Insulin secretion during the glucose tolerance test in antisocial personality. Br J Psychiatry 1983; 142:598–604
 Virkkunen M, Huttunen MO: Evidence for abnormal glucose
- Virkkunen M, Huttunen MO: Evidence for abnormal glucose tolerance test among violent offenders. Neuropsychobiology 1982; 8:30–34
- Yaryura-Tobias JA, Neziroglu FA: Violent behavior, brain dysrhythmia, and glucose dysfunction: a new syndrome. J Orthomolecular Psychiatry 1975; 4:182–188
- Prinz RJ, Roberts W, Huntaranj E: Dietary correlates of hyperactive behavior in children. J Clin Consult Psychol 1980; 40: 760-769
- Ferguson HB, Stoddart C, Simeon JG: Double blind challenge studies of behavioral and cognitive effects of sucrose-aspartame ingestion in normal children. Nutr Rev (Suppl) 1986; 44:144– 150
- Wolraich M, Milich R, Stumbo P, et al: Effects of sucrose ingestion on the behavior of hyperactive boys. J Pediatr 1985; 106:675-682
- Gross MD: Effect of sucrose on hyperkinetic children. Pediatrics 1984; 74:876–878
- 11. Behar D, Rapoport JL, Adams AJ, et al: Sugar challenge testing with children considered behaviorally "sugar reactive." Nutri-

- tion and Behavior 1984; 1:277-288
- 12. Conners CK, Caldwell J, Caldwell L, et al: Experimental studies of sugar and aspartame on autonomic, cortical and behavioral responses of children, in Diet and Behavior: An Interface Among Psychology, Medicine and Nutrition. Edited by Spring B, Chiodo J, Elias J. Lubbock, Texas Tech University Press (in press)
- 13. Milich R, Pelham WE: Effects of sugar ingestion on the classroom and playgroup behavior of attention deficit disorder boys. J Consult Clin Psychol 1986; 54:714–718
- Wurtman RJ: Neurochemical changes following high dose aspartame with dietary carbohydrates. N Engl J Med 1983; 309:429

 –430
- Richman N, Graham PJ: A behavioural screening questionnaire for use with three-year-old children: preliminary findings. J Child Psychol Psychiatry 1971; 12:5-33
- Conners CK: Rating scales for use in drug studies with children, in Psychopharmacology Bulletin Special Issue: Pharmacology of Children: DHEW Publication (HSM) 73-9002. Rockville, Md, Department of Health, Education and Welfare, 1973
- Goyette CH, Conners CK, Ulrich RF: Normative data on revised Conners parent and teacher rating scales. J Abnorm Child Psychol 1978; 6:221-236
 Achenbach T, Edelbrock C: Manual for the Child Behavior
- Achenbach T, Edelbrock C: Manual for the Child Behavior Checklist and Revised Child Behavior Profile. Burlington, University of Vermont, 1983
- 19. Conners CK: A teacher rating scale for use in drug studies with children. Am J Psychiatry 1969; 126:884-888
- 20. Kruesi MJP, Rapoport JL, Berg C, et al: 7-Day carbohydrate and other nutrient intakes of preschool boys alleged to be behavior responsive to sugar intake and their peers, in Nutrients and Brain Function. Edited by Essman WB. Basel, Karger, 1987
- Cummings EM, Ianotti RJ, Zahn-Waxler C: Influence of conflict between adults on the emotions and aggression of young children. Dev Psychol 1985; 21:495–507
- Bartko JJ, Carpenter WT: On the method and theory of reliability. J Nerv Ment Dís 1976; 163:307–317
- Colburn T, Smith B, Guerine J, et al: An ambulatory activity monitor with solid state memory. Instrument Society of America Transactions 1976; 15:149–154
- Winer BJ: Statistical Principles in Experimental Design. New York, McGraw-Hill, 1962
- 25. Bailey BJR: Tables of the Bonferroni t statistic. J American Statistical Assoc 1977; 72:469-478
- Hollingshead AB, Redlich FC: Social Class and Mental Illness: A Community Study. New York, John Wiley & Sons, 1958
- McCarthy D: McCarthy Scales of Children's Abilities. New York, Psychological Corp, 1972
 Richman N, Stevenson JE, Graham PJ: Prevalence of behaviour
- Richman N, Stevenson JE, Graham PJ: Prevalence of behaviour problems in 3-year-old children: an epidemiological study in a London borough. J Child Psychol Psychiatry 1975; 16:277–287
- Goldman JA, Lerman RH, Controis JH, et al: Behavioral effects of sucrose on preschool children. J Abnorm Child Psychol 1986; 14:565–578
- Conners CK, Blouin AG: Nutritional effects on behavior of children. J Psychiatr Res 1982/1983; 1:13–201
- 31. Zametkin A, Karoum F, Rapoport JL: Treatment of hyperactive children with D-phenylalanine. Am J Psychiatry 1987; 144: 792-794
- Wood D, Reimherr FW, Wender PH: Treatment of attention deficit disorder with DL-phenylalanine. Psychiatry Res 1985; 16:21–26
- Butcher RE, Vorhees CV: Behavioral testing in rodents given food additives, in Aspartame: Physiology and Biochemistry. Edited by Stegink LD, Filer LJ Jr. New York, Marcel Dekker, 1984
- 34. Wolraich ML, Stumbo PJ, Milich R, et al: Dietary characteristics of hyperactive and control boys and their behavioral correlates. J Am Diet Assoc 1986; 86:500-504

Relationship of Serum TSH Concentration and Antithyroid Antibodies to Diagnosis and DST Response in Psychiatric Inpatients

John J. Haggerty, Jr., M.D., Jeffrey S. Simon, M.D., Dwight L. Evans, M.D., and Charles B. Nemeroff, Ph.D., M.D.

Basal serum TSH concentration, antithyroid antibody titers, and DST response were evaluated in 124 psychiatric patients with affective symptoms. DST nonsuppressors were more likely than DST suppressors to have thyroid abnormalities.

(Am J Psychiatry 1987; 144:1491–1493)

Indices of subtle thyroid failure, including elevated basal serum concentration of thyroid-stimulating hormone (TSH), exaggerated TSH response to thyrotropin-releasing hormone (TRH), and the presence of antithyroid antibodies, have been reported to occur with greater than expected frequency in patients with affective symptoms (1–3). It is unknown whether marginal thyroid failure is equally prevalent in all subgroups of affective illness. The dexamethasone suppression test (DST) is a biological marker that may have utility in subgrouping affective illness (4, 5). The purpose of this study was to determine whether the rate of marginal hypothyroidism, as defined by elevated basal TSH concentration or the presence of antithyroid antibodies, varies with clinical diagnosis or with biological subtyping by DST response.

Received Sept. 15, 1986; revised April 10, 1987; accepted July 9, 1987. From the Departments of Psychiatry and Medicine, University of North Carolina at Chapel Hill School of Medicine; Department of Psychiatry, University of Wisconsin Medical School, Milwaukee Clinical Campus; and the Departments of Psychiatry and Pharmacology, Duke University School of Medicine, Durham, N.C. Address reprint requests to Dr. Haggerty, Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill, NC 27514. Supported in part by NIMH grants MH-33127, MH-42088, and

The authors thank Julie Dickinson for help with data collection. Copyright © 1987 American Psychiatric Association.

METHOD

The DST was given to 124 unselected patients with symptoms of affective disorder admitted to an adolescent and adult psychiatric inpatient unit. Serum thyroxine (T₄) level, triiodothyronine (T₃) uptake, calculated free T4 index, serum TSH concentration, and antithyroglobulin and antimicrosomal antibody concentrations were also measured. The sample contained 70 females and 54 males. Their mean±SD age was 36 ± 16 years (range=12-84); 35 of these patients have been previously described in detail (2). The thyroid measures were obtained within the first 3 days of admission. At the time of testing, 61 patients were receiving antidepressants other than monoamine oxidase inhibitors, 23 were receiving neuroleptics, and 18 were receiving benzodiazepine anxiolytics. Sixteen patients had taken lithium within the year preceding

The DST was performed after the 3rd hospital day, as previously described (5); the patients received 1 mg of dexamethasone at 11:00 p.m., and blood samples for measurement of serum cortisol levels were obtained at 4:00 p.m. and 11:00 p.m. the following day. Cortisol levels were determined by means of radioimmunoassay (Clinical Assays, Travenol, Deerfield, Ill.). A patient was considered to be a DST nonsuppressor if either the 4:00 p.m. or 11:00 p.m. serum cortisol level exceeded 5 µg/dl. TSH concentrations were also determined by means of radioimmunoassay (Becton-Dickenson, Orangeburg, N.Y.). The manufacturer improved the specificity of the TSH antibody in the midst of the study, which decreased the assay's upper limit of normal. The upper limit of normal for the basal serum TSH concentration was defined as 8.5 μU/ml for the first 39 patients studied and 5.9 μU/ml

TABLE 1. DST, TSH, and Thyroid Antibody Findings in Psychiatric Patients With Affective Symptoms	TABLE 1. DS7	r, TSH, and	Thyroid Antibody	Findings in F	Psychiatric Patients	With Affective Symptoms
--	--------------	-------------	------------------	---------------	----------------------	-------------------------

		DST Nons	suppression	Elevated '	TSH Level	Thyroid Antibodies	
DSM-III Diagnosis	N	N	%	N	%	N	%
Major affective disorder	102	49	48	10	10	20	20
Major depression	74	35	47	5	7	13	17
Bipolar disorder, manic	6	2	33	1	16	0	0
Bipolar disorder, mixed	6	3	50	0	0	2	33
Schizoaffective disorder	6	4	66	1	16	0	0
Organic affective syndrome	5	3	60	2	40	1	20
Atypical depression	5	2	40	1	20	4	80
Other disorders ^a	22	4	18	1	5	1	5
Total	124	53	43	11	9	21	17

^aAdjustment disorder (N=8), anxiety disorders (N=4), bulimia (N=2), conduct disorder (N=2), dysthymic disorder (N=1), alcohol abuse (N=1), posttraumatic stress disorder (N=1), paranoia (N=1), attention deficit disorder (N=1), mental retardation (N=1).

for the subsequent 85 according to which TSH antibody was used.

Antithyroid antibody levels were measured with tanned erythrocyte agglutination (Burroughs-Wellcome, Research Triangle Park, N.C.), and the result was considered positive if either antibody was present at a dilution of 1:10 or greater. Patients meeting Carroll et al.'s exclusion criteria for valid DST testing (4) were omitted. *DSM-III* diagnoses were established by the attending psychiatrist (J.J.H. or D.L.E.) without knowledge of DST results.

RESULTS

DST nonsuppression was observed in 53 (43%) of the patients. Eleven patients (9%) had abnormally high serum TSH concentrations; two (5% of 39) of these were studied with the earlier TSH antibody, and nine (11% of 85) were studied with the improved antibody. One of the patients with elevated TSH concentrations had overt hypothyroidism (grade 1), and 10 had normal T4 levels, T3 uptake, and free T4 indexes (grade 2 hypothyroidism). No case of hyperthyroidism was observed. Twenty-one (17%) of the patients had positive antithyroid antibody titers; the TSH level was elevated in seven of these and normal in 14. Lithium had been given to five of the patients with thyroid abnormalities (two with elevated TSH levels, two with positive antibody titers, one with both) and 11 of the patients without thyroid abnormalities (nonsignificant difference). The patients with elevated basal TSH levels had a lower mean free T4 index than did all the patients with normal TSH concentrations (2.58 versus 3.38; t=3.58, df=117, p<.001, two-tailed) or the patients with positive thyroid antibody titers alone (2.58 versus 3.52; t=2.37, df=28, p<.05, two-tailed).

The thyroid and DST findings are summarized by DSM-III diagnosis in table 1. Basal serum TSH concentration was significantly correlated with postdexamethasone serum cortisol concentration at both 4:00 p.m. (r=.25, N=120, p<.01) and 11:00 p.m. (r=.32, N=117, p<.001). Serum TSH concentration was found to be elevated in nine (17%) of the 53 DST

nonsuppressors but in only two (3%) of the 71 suppressors (p<.01, Fisher's exact test, two-tailed). Thyroid antibodies were present in 14% of the nonsuppressors and 19% of the suppressors (nonsignificant difference).

DISCUSSION

Elevation of basal serum TSH concentration is thought to signify relative thyroid deficiency (1, 6). The presence of antithyroid antibodies may identify even earlier and milder grades of hypothyroidism (3, 6). It has been suggested that these abnormalities may predispose individuals to develop depression (1–3) or other affective disorders (7). Accordingly, Gold et al. (1, 3) found that 3%–5% of depressed patients had elevated basal TSH concentrations, and antithyroid antibodies have been reported in 9%–20% (2, 3). Using criteria similar to ours, Tunbridge et al. (6) found elevated TSH concentrations in 5% of the general population and antithyroid antibodies in 5.3%.

We now report finding elevated basal serum TSH concentrations in 9% of patients with affective symptoms and in 17% of those with DST nonsuppression. Our overall 9% rate is slightly higher than that reported by Gold et al. (1, 3) for depressed patients. However, unlike Gold et al., we included patients with manic symptoms as well as those with depressive symptoms. Elevated TSH concentrations were no more frequent in patients who met the DSM-III criteria for a major affective disorder than in those who did not. The significantly higher prevalence of elevated TSH levels in DST nonsuppressors than in DST suppressors is a new finding and suggests an interaction between the hypothalamic-pituitary-thyroid (HPT) and hypothalamic-pituitary-adrenal (HPA) axes in psychiatric patients with affective symptoms and marginal hypothyroidism.

On the basis of the lack of concordance between DST nonsuppression and TRH blunting, Targum et al. (8) suggested that HPT axis dysfunction and HPA axis dysfunction occur independently in depression. Our find-

ings do not necessarily contradict this, because TRH blunting in depressed patients and TSH elevation may reflect dysfunction at different levels in the HPT axis. TRH blunting may be the result of dyscontrol at the CNS level (9), whereas TSH elevation probably reflects thyroid gland dysfunction (1, 6). Cortisol metabolism is slowed in overt hypothyroidism (10). A prolonged cortisol half-life could presumably interfere with dexamethasone-induced cortisol suppression or at least alter the duration of suppression. Our findings may also be partially accounted for by pharmacologic factors.

Our finding of a 17% rate of positive thyroid antibody titers confirms the earlier finding by our group and others (2, 3) that symptomless autoimmune thyroiditis occurs frequently in psychiatric patients with affective symptoms. Unlike elevated basal TSH concentration, antibody status was unrelated to DST response. This difference may be due to the fact that thyroid function, as measured by free T₄ index, was lower in the patients with elevated TSH levels.

Our findings suggest that psychiatric patients with affective symptoms who exhibit DST nonsuppression may benefit from full thyroid evaluation. Had we used TRH stimulation testing along with measurement of the basal TSH level, we conceivably could have found an even higher prevalence of HPT axis alterations in patients with DST nonsuppression. This possibility needs to be confirmed with prospective studies using

TRH stimulation testing as well as measurement of baseline TSH concentration.

- Gold MS, Pottash ALC, Extein I: Hypothyroidism and depression: evidence from complete thyroid function evaluation. JAMA 1981; 245:1919-1922
- Nemeroff CB, Simon JS, Haggerty JJ Jr, et al: Antithyroid antibodies in depressed patients. Am J Psychiatry 1935; 142: 840–843
- 3. Gold MS, Pottash ALC, Extein I: "Symptomless" autoimmune thyroiditis in depression. Psychiatry Res 1982; 6:261--269
- 4. Carroll BJ, Feinberg M, Greden JF, et al: A specific leboratory test for the diagnosis of melancholia: standardization, validation, and clinical utility. Arch Gen Psychiatry 1981; 18:15–22
- Evans DL, Burnett GB, Nemeroff CB: The dexan ethasone suppression test in the clinical setting. Am J Psychiatry 1983; 140:586-589
- Tunbridge WMG, Evered DC, Hall R, et al: The spectrum of thyroid disease in a community: the Whickham survey. Clin Endocrinol 1977; 7:481

 –492
- Cowdry RW, Wehr TA, Zis A, et al: Thyroid abnormalities associated with rapid-cycling bipolar illness. Arch Gen Psychiatry 1983; 40:414

 420
- Targum SD, Sullivan AC, Byrnes SM: Neuroendocrine interrelationships in major depressive disorder. Am J Psychiatry 1982; 139:282–286
- Loosen PT, Prange AJ: Serum thyrotropin response to thyrotropin-releasing hormone in psychiatric patients: a review. Am J Psychiatry 1982; 139:405-416
- Gordon GG, Southern AL: Thyroid-hormone effects on steroid-hormone metabolism. Bull NY Acad Med 1977; 53::242–259

Tardive Dyskinesia and Neuroleptic-Induced Parkinsonism in Japan

Renee L. Binder, M.D., Hajime Kazamatsuri, M.D., Tsuyoshi Nishimura, M.D., and Dale E. McNiel, Ph.D.

The authors studied neuroleptic drug response in 126 inpatients in Japan. They found similar prevalences and risk factors of tardive dyskinesia and neuroleptic-induced parkinsonism in Japan and the West, despite cross-cultural differences in psychiatric practice.

(Am J Psychiatry 1987; 144:1494–1496)

he role of culture and ethnicity in neuroleptic drug response of Asian patients is controversial. Studies have reached conflicting conclusions about whether Asian-American patients require lower doses of neuroleptic medication or are more likely to develop side effects (1, 2). One reason for such discrepancies is that American studies on pharmacological response of Asians have usually used small patient samples and mixed ethnic groups, e.g., Japanese, Chinese, Koreans, and Vietnamese (1, 2).

This study examines the prevalence and risk factors of two categories of neuroleptic side effects, tardive dyskinesia and parkinsonism, in an ethnically homogeneous, Asian patient group. We compare our results with studies from the United States and Europe.

METHOD

Working collaboratively in Tokyo and Osaka, Japan, with the chairmen of the departments of psychi-

Presented at the 140th annual meeting of the American Psychiatric Association, Chicago, May 9-14, 1987. Received Oct. 17, 1986; revised April 6 and May 26, 1987; accepted July 9, 1987. From the Departments of Psychiatry, University of California, San Francisco, Teikyo University, Tokyo, and Osaka University. Address reprint requests to Dr. Binder, 401 Parnassus Ave., San Francisco, CA

Supported in part by a 1986 World Health Organization travel fellowship.

The authors thank Dr. Michio Takemura, Dr. Noboru Takazawa, Dr. Shinichiro Demura, Dr. Norio Takemura, Dr. Michio Ozawa, Dr. Takuo Iwaki, Miss Yumi Noguchi, Dr. Kohshi Hatada, Dr. Yoshio Kudo, Dr. Hiroshi Nakajima, and Dr. Hirokazu Asao, all of whom helped with the project in Japan, and Thomas Greenfield, Ph.D., who helped with the statistical analysis.

Copyright © 1987 American Psychiatric Association.

atry in university medical schools (H.K. and T.N.), the first author (R.L.B.) visited six psychiatric hospitals and examined 126 patients who had been selected randomly for participation in the study by the chief psychiatrist at each hospital. Patients with primary neurologic disease were excluded.

Tardive dyskinesia was assessed with the Abnormal Involuntary Movement Scale (AIMS) (3), which was translated into Japanese by the second author (H.K.) to facilitate Japanese staff psychiatrists giving standard instructions to each patient. All ratings were made by the first author (R.L.B.) working with staff psychiatrists at each hospital. On the basis of the AIMS ratings, patients with tardive dyskinesia were classified as having "at least mild" or "moderate or severe" tardive dyskinesia (table 1).

Patients were also examined and rated from 0 (absent) to 3 (severe) for signs of parkinsonism, including resting tremor, cogwheeling, and facial masking. Patients were considered to have parkinsonism if they had at least a mild resting tremor, moderate cogwheeling, or moderate facial masking.

The patients' medical records were reviewed for demographic and treatment history information. Daily doses of neuroleptic medications were converted into chlorpromazine equivalents. For Japanese neuroleptics not released in the United States, conversions were based on the Japanese Physicians' Desk Reference.

RESULTS

Among the 126 patients, 119 (94%) had a primary diagnosis of schizophrenia and seven (6%) had other diagnoses. Their mean \pm SD body weight was 59.5 ± 11.8 kg. All other clinical and demographic characteristics of the patients are given in table 1. All patients were given antiparkinsonian medication (usually benztropine, biperiden, trihexiphenidyl, or amantadine).

Of the 126 patients, 14.2% (N=18) had moderate or severe tardive dyskinesia and 20.6% (N=26) had at least mild tardive dyskinesia. The prevalence of parkinsonian symptoms was 40.5% ($\tilde{N}=51$).

Patients with and without tardive dyskinesia were compared by using t tests for continuous variables and chi-square tests for categorical variables. There was a

TABLE 1. Characteristics of 126 Japanese Inpatients Receiving Neuroleptics Who Did or Did Not Have Tardive Dyskinesia

	S	Sex		ears) ^a	Neuroleptic Dose (mg/day) ^b		Hospitalization (months) ^c	
Patient Category	M	F	Mean	SD	Mean	SD	Mean	SD
All patients Tardive dyskinesia status ^d Moderate or severe	66	60	38.5	12.4	1633.8	1525.5	68.8	73.2
Present (N=18)	10	8	49.5	14.3	1273.8	1402.7	101.6	77.7
Absent (N=108) At least mild	56	52	36.7	11.1	1693.9	1542.9	63.2	71.4
Present (N=26)	17	9	49.1	12.9	1471.3	1361.4	90.2	69.7
Absent (N=100)	49	51	35.8	10.8	1676.1	1568.9	63.1	73.4

^aPatients with moderate or severe tardive dyskinesia were significantly older than those without (t=4.34, df=124, p<.01); those with at least mild tardive dyskinesia were significantly older than those without (t=5.39, df=124, p<.01). bChlorpromazine equivalents.

significant association between older age and the presence of both categories of tardive dyskinesia (table 1). In addition, there was a significant association between greater length of hospitalization and moderate or severe tardive dyskinesia and a nonsignificant trend when the milder tardive dyskinesia cases were included. Length of hospitalization was taken as a measure of duration of neuroleptic treatment, since all of the patients were maintained on neuroleptics during the entire course of hospitalization. No significant associations were found between the presence of tardive dyskinesia and sex, body weight, and daily dose of neuroleptics.

Parkinsonism was more prevalent in patients who received higher doses of neuroleptics. The mean±SD dose of neuroleptics was 2068.7±1739.9 mg/day for patients with parkinsonism and 1338.1±1290.9 mg/ day for patients without parkinsonism (t=2.70, df= 124, p<.01). No significant associations were found between parkinsonism and the other clinical and demographic variables.

DISCUSSION

Studies from North America and Europe (4, 5) have shown a 0.5%-56% prevalence (mean prevalence of 20%) of tardive dyskinesia. Studies from Japan (6, 7) have revealed a 5%-20% prevalence, and we found a 14%–21% prevalence in Japanese inpatients. These findings suggest a similar prevalence of tardive dyskinesia in Japanese and Western patients.

We did not find a significant association between tardive dyskinesia and dose of neuroleptics, a finding that agrees with previous studies (4, 5). We also did not find a significant association between sex and presence of tardive dyskinesia, replicating findings from Japanese studies (6, 7) but contrasting with findings from Western studies which show that women are more likely to have tardive dyskinesia (4, 5). The reasons for this difference between Japanese and Western studies are unclear.

Our observed prevalence of neuroleptic-induced parkinsonism was 40.5%, even though all patients were given prophylactic antiparkinsonian agents. North American and European studies (8) have reported widely varying prevalences of parkinsonism (10.6%-100%); a Japanese study (7) reported a rate of 17.8%. As expected, parkinsonism was associated with higher doses of neuroleptics. Interpretation of previous studies on neuroleptic-induced parkins mism is complicated because many studies do not specify whether patients are taking prophylactic antiparkinsonism agents and because definitions of parkinsonism vary between studies. Therefore, cross-cultural comparisons are difficult.

The fact that our results concerning prevalence and risk factors of tardive dyskinesia are similar to results from Western studies is remarkable, considering differences in the practice of psychiatry between Japan and the West. For example, in Japan, polypharm acy is common. Many Japanese psychiatrists believe that the physician can more specifically address target symptoms by using a combination of neuroleptics; e.g., if an agitated patient has auditory hallucinations, chlorpromazine is often prescribed for the agitation along with haloperidol for the hallucinations. An additional aspect of polypharmacy is that antiparkinsonian agents are routinely prescribed simultaneously with neuroleptics to minimize extrapyramidal symptoms. Polypharmacy is also related to the tradition of Orienta! herb medicine in which the best prescriptions usually include a mixture of many ingredients. In fact, it has been thought that the larger the number of ingredients, the more effective the drug action.

Another difference between Japanese and Western psychiatric practice is that recommended daily doses of antipsychotic drugs are relatively low in Japan (1). For example, in Japan the suggested daily doses of fluphenazine and haloperidol for psychosis are only 1-10 mg and 3-6 mg, respectively. Although a low dose of each drug is recommended, the mean total daily dose or the combination of medications (1634 mg in chlorr romazine equivalents) given to the inpatients in this study

Patients with moderate or severe tardive dyskinesia were hospitalized significantly longer than those without (t=2.08, df=124, p< 05). Moderate or severe tardive dyskinesia=AIMS score of 2 or higher on two body parts or 3 or higher on one body part; at least mild ardive dyskinesia=AIMS score of 2 or higher on at least one body part.

was, in fact, high by current Western standards (9). In addition, some domestic antipsychotic drugs developed by Japanese pharmaceutical companies and used in Japan have not been released in other countries.

Finally, the length of stay of psychiatric patients in Japanese hospitals is longer than in most Western countries. The reasons for longer stay include civil commitment laws permitting long-term involuntary hospitalization, the stigma attached to the mentally ill that encourages many Japanese families to keep patients away from home, and the lack of community alternatives to hospitalization (10).

REFERENCES

- Sramek JJ, Sayles MA, Simpson GM: Neuroleptic dosage for Asians: a failure to replicate. Am J Psychiatry 1986; 143:535– 536
- 2. Binder RL, Levy R: Extrapyramidal reactions in Asians. Am J

- Psychiatry 1981; 138:1243-1244
- Guy W: ÉCDEÚ Assessment Manual for Psychopharmacology: US Department of Health, Education and Welfare Publication 76-338. Washington, DC, DHEW, Psychopharmacology Research Branch. 1976. pp. 534-537
- search Branch, 1976, pp 534-537

 4. Kane JM, Smith JM: Tardive dyskinesia: prevalence and risk factors, 1959 to 1979. Arch Gen Psychiatry 1982; 39:473-481
- 5. Tepper SJ, Haas JF: Prevalence of tardive dyskinesia. J Clin Psychiatry 1979; 40:508-516
- Itoh H: Drug-induced tardive dyskinesia, in Current Developments in Psychopharmacology, vol 6. Edited by Essman W, Valzelli L. Jamaica, NY, SP Medical & Scientific Books, 1981
- Yagi G, Ogita K, Ohtsuka N, et al: Persistent dyskinesia after long-term treatment with neuroleptics in Japan. Keio J Med 1976; 25:27–35
- 8. Murphy JE, Stewart RB: Efficacy of antiparkinsonian agents in preventing antipsychotic-induced extrapyramidal symptoms. Am J Hosp Pharm 1979; 36:641–644
- Baldessarini RJ, Katz B, Cotton P: Dissimilar dosing with high-potency and low-potency neuroleptics. Am J Psychiatry 1984; 141:748-752
- 10. Munakata T: Sociocultural background of the mental health system in Japan. Cult Med Psychiatry 1986; 10:351-365

Follow-Up Study of 11 Patients With Potentially Reversible Tardive Dyskinesia

Gohei Yagi, M.D., and Hitoshi Itoh, M.D.

The authors followed the course of 11 patients with potentially reversible tardive dyskinesia while they were taking minimum effective neuroleptic doses. After 10 years, the symptoms of tardive dyskinesia had disappeared in eight patients, were minimal or questionable in one, and had become persistent in two.

(Am J Psychiatry 1987; 144:1496–1498)

One of the most serious clinical problems in tardive dyskinesia due to treatment with neuroleptics is that the condition may become irreversible. Clinical cases

of reversible tardive dyskinesia, which disappears after discontinuation or reduction of the dose of neuroleptics, have been reported (1, 2). At present, however, two questions about reversible tardive dyskinesia are being asked. The first is whether such reversible tardive dyskinesia is a milder form or an early stage of the well-known classical, irreversible tardive dyskinesia or is a clinical entity distinct from it. The second question is whether reversible tardive dyskinesia may recur, be aggravated, or become irreversible as a result of additional and prolonged administration of neuroleptics. We report our study as a contribution to answering these questions and to determining the prophylaxis of irreversible tardive dyskinesia.

Presented at the 139th annual meeting of the American Psychiatric Association, Washington, D.C., May 10–16, 1986. Received May 12, 1986; revised Dec. 29, 1986, and April 27, 1987; accepted June 12, 1987. From the Department of Neuropsychiatry, School of Medicine, Keio University. Address reprint requests to Dr. Yagi, Department of Neuropsychiatry, School of Medicine, Keio University, 35 Shinanomachi Shinjukuku, Tokyo 160, Japan.

Dr. Itoh died in 1985.

Copyright © 1987 American Psychiatric Association.

METHOD

We checked once a month at a Japanese hospital for the presence or absence of tardive dyskinesia in all inpatients who were given neuroleptics for the first time after 1969. By 1976 we had found mild abnormal movements reminiscent of the typical signs of tardive

TABLE 1. Drug Treatment Histories and AIMS Scores of 11 Patients With Initially Reversible Tardive Dyskinesia Followed Up for 10 Years or More

				(chlorpr	otic Dose omazine s, mg/day		Antiparl	eriod of cinsonian n (months)	1007	
n .	C	Age	Duration of Initial Tardive Dyskinesia	Before of Tar Dyski	rdive nesia	After (of Tai Dyskin	rdive nesia	Before Onset of Tardive	After Onset of Tardive	1986 AIMS Score (global	Medication at 1986
Patient	Sex	(years)	(months)	Mean	SD	Mean	SD	Dyskinesia	Dyskinesia	severity) ^a	Follow-Up (m _ξ /day)
1	F	52	3	186	57	173	48	14	0	2	Levomepromazir e, 100; nitrazepam, 10
2	F	42	<1	133	119	118	42	4	<1	0	Levomepromazire, 100
2 3	F	61	5	100	62	33	53	2	0	0	None
4 5	M	38	12	175	77	70	47	10	<1	0	Thioridazine, 25
5	F	42	<1	93	15	23	39	0	20	0	Lithium, 400; su'piride, 150; promethazine, 75
6	F	40	2	208	74	238	195	16	15	2	Levomepromazine, 75
6 7	F	44	2 3	278	68	193	83	4	9	0	Lithium, 1200; fluphenazine, 6
8	F	45	6	76	20	58	15	26	<1	0	Levomepromazine, 50; imipramine, 50
9	F	48	7	63	35	40	30	0	<1	1	Levomepromazine, 25; sulpiride, 400; promethazine, 50
10	F	60	8	80	28	40	26	2	0	0	Thioridazine, 25
11	F	50	4	85	31	63	38	0	0	0	None

^aOn the AIMS, 0=none, normal, 1=minimal, 2=mild, 3=moderate, 4=severe.

dyskinesia in the buccolinguomasticatory region of 22 (six men and 16 women) of 238 inpatients. The mean±SD age of the patients at the manifestation of the abnormal movements was 39±12.5 years, ranging from 21 to 68 years, and the mean±SD duration of neuroleptic medication was 18.8±16.4 months, ranging from 0.8 to 61.0 months. The psychiatric diagnosis was schizophrenia for 18 patients, manic phase of affective psychosis for three, and chronic alcoholism for one.

The abnormal movements found in the 22 patients during the period from 1969 to 1976 disappeared after the discontinuation of neuroleptics for 16 patients, reduction of the dose for three patients, and change to another neuroleptic (levomepromazine or thioridazine) for three patients. The abnormal movements continued for 4.9 ± 3.4 months, ranging from 0.5 to 13.0 months, before these measures became effective. We considered the abnormal movements observed in these patients to be reversible tardive dyskinesia and included the patients in our subsequent follow-up study.

The psychiatric symptoms in the patients with tardive dyskinesia were controlled with minimum doses of neuroleptics. Antiparkinsonian drugs (trihexyphenidyl, 6.0 mg/day, or promethazine, 75 mg/day) were added only when extrapyramidal symptoms appeared. The symptoms of tardive dyskinesia were scored at a monthly psychiatric interview on one of three ratings: none, minimal or questionable, and definite. The symptoms were evaluated once a year from 1977 by means of the Abnormal Involuntary Movement Scale (AIMS) (3).

RESULTS

At the time of our outcome study, carried out in March 1986, four of the 22 patients had died and seven had dropped out of the follow-up study after discharge. An outline of drug therapies before and after the manifestation of initial tardive dyskinesia and the 1986 AIMS (global severity) scores of the remaining 11 patients are shown in table 1. The mean follow-up period for the 11 patients was 12.1 years.

Of the 11 patients, eight had had no tardive dyskinesia symptoms for several years previously. One patient (patient 9) showed linguomasticatory dyskinesia and a tapping movement of her legs only when the activation procedure of the AIMS was used. Definite symptoms of tardive dyskinesia had persisted for more than 1 year in two patients (patients 1 and 6), in whom reversible tardive dyskinesia probably recurred, to become irreversible. The course of tardive dyskinesia in these two patients is described in the following paragraphs.

CASE REPORTS

Case 1. Ms. A (patient 1) was admitted to our hospital in 1970 because of a paranoid-hallucinatory state. She was first given chlorpromazine, 75–300 mg/day, and later, levomepromazine, 100–250 mg/day. Slight lipsmacking movements appeared 2 years later, after 4 weeks of medication with clothiapine, 150 mg/day. Her drug was changed back to levomepromazine, 150 mg/day, and absence of abnormal movements was confirmed 3 months after this. At her evaluation in 1983, no abnormal movement was found,

although slight parkinsonism was present. Ms. A's dose of levomepromazine was decreased to 100 mg/day in 1985 because of a complaint of drowsiness. One week later, a definite blowing movement accompanied by oscillation of her head and tapping movements of her legs appeared. These abnormal movements had persisted for 1 year at the time of the 1986 outcome study.

Case 2. Ms. B (patient 6) was admitted to the hospital in 1972 because of a catatonic stupor. She was given haloperidol, 4.5 mg/day, followed by levomepromazine, 200 mg/ day, and fluphenazine, 8.0 mg/day. She developed a slight linguomasticatory dyskinesia a year later, after she had taken chlorpromazine, 150 mg/day, for 3 weeks. Her medication was changed back to levomepromazine, 100 mg/day, and the abnormal movements disappeared after 2 months. Her auditory hallucinations became aggravated, and she was given various neuroleptics in various doses over the next 10 years. At evaluation in 1983, rhythmical torsional movements of the tongue and abnormal movements of the lower jaw were present. Ms. B's dose of levomepromazine was decreased from 150 to 75 mg/day, and the trihexyphenidyl that she had been taking was discontinued. Marked linguomasticatory dyskinesia had persisted for more than 3 years at the time of the 1986 outcome study.

DISCUSSION

Our 22 patients with reversible tardive dyskinesia were quite similar to 12 patients with reversible tardive dyskinesia reported by Quitkin et al. (1) with regard to age at onset, duration of neuroleptic medication before onset, and duration of initial tardive dyskinesia; the only difference was that women predominated in our group of patients. Wegner and Kane (4) followed the course of five of the 12 patients observed by Quitkin et al. and reported that tardive dyskinesia recurred in most of them, although there were no severe cases. In most of our patients, tardive dyskinesia recurred occasionally, but no recurrent cases have been seen for the past several years, except for the two patients whose cases we have presented. The considerable reduction in neuroleptic doses after the initial onset of tardive dyskinesia seems to have resulted in the favorable outcome of these patients.

Another notable finding of our study was that tardive dyskinesia recurred and became persistent in two patients. This unfavorable outcome seems to be attributable to the fact that the doses of neuroleptics could not be sufficiently reduced because of the presence of serious psychiatric symptoms. However, it has been reported that reversible tardive dyskinesia became irreversible after readministration of low neuroleptic doses in some older patients (5, 6). We suggest that the age of the patients rather than the dose of neuroleptics affected the reversibility of tardive dyskinesia in these patients.

Although data on the long-term prognosis of reversible tardive dyskinesia are insufficient at this time, we draw the following tentative conclusions on the basis of our findings. 1) Mild cases of reversible tardive dyskinesia in younger patients may be an early stage of classical, irreversible tardive dyskinesia. 2) If the first signs of tardive dyskinesia are detected in the early stage and the dose of neuroleptic is decreased to as low a level as possible, aggravation of tardive dyskinesia can be prevented in some cases, even after prolonged neuroleptic medication administration extending over 10 years or more.

- Quitkin F, Rifkin A, Gochfeld L, et al: Tardive dyskinesia: are first signs reversible? Am J Psychiatry 1977; 134:84–87
 Yagi G, Itoh H, Miura S: "Reversible" tardive dyskinesia—its
- onset and long-term prognosis. Seishin Igaku 1978; 20:49-58
- 3. Guy W: ECDEU Assessment Manual for Psychopharmacology: US Department of Health, Education and Welfare Publication 76-338. Washington DC, DHEW, Psychopharmacology Re-
- search Branch, 1976, pp 534-537

 4. Wegner JT, Kane JM: Follow-up study on the reversibility of tardive dyskinesia. Am J Psychiatry 1982; 139:368-369
- 5. Schmidt WR, Jarcho LW: Persistent dyskinesias following phenothiazine therapy. Arch Neurol 1966; 14:369-377
- Chouinard G, Bradwejn J: Reversible and irreversible tardive dyskinesia: a case report. Am J Psychiatry 1982; 139:360-362

Book Forum

Nancy C. Andreasen, M.D., Ph.D., Editor

PSYCHOTHERAPY AND PSYCHOANALYSIS

The Transference in Psychotherapy: Clinical Management, edited by Evelyne Albrecht Schwaber, M.D. New York, International Universities Press, 1986, 181 pp., \$22.50.

In November 1981 the American Psychoanalytic Association sponsored a 2-day workshop in New York City for mental health professionals on the clinical management of transference in psychotherapy. Seven contributors, all of eminent standing, were involved. The group felt that the contributions were sufficiently important to be put in book form; the proceedings were therefore edited by Dr. Schwaber, a training and supervising analyst of the Boston Psychoanalytic Society and Institute. The book itself represents edited versions of the interchange of views between the various contributors, particularly addressed to the questions put to them about such things as, "What is transference?" "How is it handled?" "When and how does it appear?" "What is the difference between transference in formal psychoanalysis and psychoanalytically oriented psychotherapy?" and "How much does transference remain after treatment?" In a sense, the answer to this last question is that presumably to some degree transference continues throughout life just as the unconscious does. Other issues were addressed, such as intrapsychic and interpersonal "reality" as well as reality itself, which is difficult, if not impossible, to define.

The core of the book begins with Freud's case of Dora, who fled analysis after Freud failed to deal with transference issues properly. Only later did Freud explain his mistake.

Many changes and modifications have taken place over the years in our concept of transference, and there have been inevitable differences of opinion. It seems to me that the differences are far outweighed by the agreements and that Freud adjusted to the right track early on.

Of particular interest in this book is the chapter by Dr. Eleanor Galenson on "Preoedipal Influences Reflected in the Transference," in which she connects infant and child work with that done with adults. Like other authors, she cites case histories, thus making the chapter more interesting. This is also especially true in Dr. Jacob Arlow's chapter, "Interpretations and Psychoanalytic Psychotherapy: A Clinical Illustration." It begins with the prospective patient's first telephone call and how Dr. Arlow handles the situation. It also offers other authors an opportunity to describe how they would have handled this.

One of the many issues this book deals with is transference and its management in classical psychoanalysis as compared with psychoanalytically oriented psychotherapy. Some contributors point out what they consider to be a big difference, while others minimize but do not eliminate the difference. Some feel that transference is more normal than do others. It would seem to me that if transference is a ubiquitous phenomenon both before and after treatment it would be difficult to label it abnormal.

It is hard for me to decide who is right and who is wrong

because there are so many factors involved. If you put a patient on the couch five times a week or see him or her face-to-face once or twice a week, the objects and methods of therapy will differ, including the management of transference, but transference will still be there. Our reactions to others, whether we are lying down, sitting up, in a dental chair, dealing with an authority, or even dealing with a spouse, will be determined at least in part by our own early experiences and to a degree by the personality and psychological interventions of the person with whom we are dealing.

If, in fact, transference occurs everywhere, psychoanalysis and psychoanalytically oriented psychotherapy are the only places where it is truly understood and used as part of the treatment process.

Another important aspect dealt with in this book is the treatment and transference in narcissistic, borderline, and, at times, even psychotic patients. In neurotic patients there is an alliance between the healthy part of the patient and the analyst or psychotherapist. This gives rise to a ther peutic alliance, which, if handled well, makes the treatment process go correctly. Patients who are more sick, who have never surmounted the symbiotic phase with their mothers, are extremely narcissistic, and the therapist is hard put to develop a therapeutic alliance; the patient projects in constantly. The patient can be convinced that the therapist is "good" or "bad," but this comes from within the patient, and the therapist can only roll with the punches. Vacillation describes this well and correctly defines the therapist reactions as not necessarily countertransference.

This book is thought provoking for anyone in the mental health field. It reveals how much we have learned and how much we have yet to learn. It removes the notion of therapists' omnipotence and lets them be human beings who are constantly trying to improve their knowledge of themselves as well as their patients. They can agree or disagree on some areas but still respect their colleagues. This book is "healthy" reading to be recommended to psychoanalysts as well as other mental health workers.

STUART M. FINCH, M.D. Augusta, Ga.

Psychoanalysis: The Science of Mental Conflict (Essays in Honor of Charles Brenner), edited by Arnold D. Richards and Martin S. Willick. Hillsdale, N.J., Analytic Press, 1986, 439 pp., \$39.95.

Few psychoanalysts have had as much influence on the learning of psychoanalytic theory by psychiatrists in training as Charles Brenner. His An Elementary Textbook of Psychoanalysis (1, 2) brought together the essence of Freud's teaching before the Standard Edition of Freud's psychological works was available. The two editions of Brenner's textbook have been read by thousands of psychiatrists. Few people know that Brenner was a distinguished neurologist

before attaining psychoanalytic prominence with his major clarifications of and contributions to classical psychoanalytic theory. Now we have a volume of essays by 19 distinguished contributors edited in honor of Brenner's 70th birthday. The contributors are writers close to Brenner in theoretical outlook; they seek to elaborate on ideas that have interested him.

Arnold Richards introduces the papers by summarizing Brenner's own work. He also introduces a leitmotif that is to reappear in many of the other contributions—a contrast of Brenner's view and that of mainstream psychoanalysis with that of Kohut and other self psychologists. Brenner has not always found Freud's theorizing complete, but he does believe in the usefulness of Freud's work as the foundation for all further elaboration. Most important to Brenner is the centrality of the concepts of mental conflict and compromise formation. It is to this central dedication that the different writers pay particular homage, and it is this position which Brenner himself states explicitly in his own brief chapter, "Reflections": "As I see it the most important thing to keep in mind is this. Everything in psychic life with which one has to deal as an analyst is a compromise formation" (p. 39). By this he means a combination of a drive derivative, the anxiety or depression associated with the drive derivative, defenses, and superego functioning. "I know that I myself had to make a conscious decision years ago to listen to whatever a patient

said as a compromise formation" (p. 40).

The subsequent essays are divided into six sections written by mainstream analysts. The brief introductions to each section by Dr. Willick aptly present the papers to follow and allow for selective reading. The first section, entitled The Theory of Psychoanalysis, starts with Jacob Arlow, who has been closely associated with Brenner as a coauthor and cotheorist. He discusses how different views of pathogenesis powerfully influence the way in which psychoanalytic treatment is conducted. Arlow sees Kohut as the most consistent and comprehensive revisionist, whose technical innovations compromise analysis of the transference. In the next chapter, William Grossman studies psychoanalytic models by means of a careful investigation of Karen Horney's dissidence. The recent resurgence of interest in Horney makes Grossman's point-by-point contrast of Freud's and Horney's psychologies of women quite timely. Leo Rangell then presents what he believes to be the components of the enduring armature of psychoanalytic theory and method. He cites the analytic attitude, neutrality, and interpretations that promise a diminution of anxiety and an increase of mastery. Theodore Shapiro contributes an article extending Brenner's interest in sign and symbol within instructional theory to include an exploration of the place of linguistic analysis. He equates what is known as unconscious wishes in psychoanalysis with the deep structures of linguistics. Shapiro reminds us to hear a patient saying that he or she feels empty not as making a final statement but as expressing a paraphrase. Shapiro risks telling us one of his own dreams during his analysis and applies linguistic concepts to its interpretation.

In the next section, The Concepts of Psychoanalysis, one finds conflict and compromise formation applied to the concept of perception, a historical review of sublimation, a recapitulation of the development of the object concept in Freud's work that asks how anything becomes mental, and a chapter on the nature and developmental origins of affect.

Part three deals with the technique of psychoanalysis. Sandor Abend's chapter on problems in the evaluation of the psychoanalytic process synthesizes traditional and fresh ideas. Harold Blum grapples with the various meanings and

controversies surrounding countertransference, noting the shift over recent years away from an exclusive focus on the patient's intrapsychic processes to the current focus on a two-person analytic field of forces. Paul Gray's chapter "On Helping Analysands Observe Intrapsychic Activity" is a rare contribution telling how to enhance the analysand's role, first as helper and then as self-analyst. Edward Joseph discusses insight from the point of view of both the analysand and the analyst.

Part four deals with clinical practice and is rich in case material. The general reader would do well to turn directly to these excellent papers. Part five covers the teaching of psychoanalysis and consists of only a single paper, an informal report of many years of sage supervision by Martin Waugh. Those who feel that supervision must be carefully structured would benefit from his abjuration of the supervisee's use of written notes in favor of telling the story of the treatment. Frequently, Waugh would stroll through Central Park with his supervisee to provide a relaxed atmosphere. Part six of this book also contains but one paper, Leon Balter's chapter on applied psychoanalysis. Balter continues his study of charismatically led groups, paying special attention to two forms of highly specialized social groups, religion and the state. In Balter's view, their conflict-resolving appeal may be present as early as the phallic/oedipal phase of a child's development.

To Charles Brenner and to the editors of this volume: "Well done!"

REFERENCES

- Brenner C: An Elementary Textbook of Psychoanalysis. New York, International Universities Press, 1955
 Brenner C: An Elementary Textbook of Psychoanalysis, 2nd ed.
- Brenner C: An Elementary Textbook of Psychoanalysis, 2nd ed New York, International Universities Press, 1973

JEROME A. WINER, M.D. Chicago, Ill.

Progress in Self Psychology, vol. 1, edited by Arnold Goldberg. New York, Guilford Press, 1985, 256 pp., \$26.95.

Over his long and brilliant psychoanalytic career, Heinz Kohut evolved a profound appreciation of the significance of the psychopathology of narcissistic vulnerability—the incohesiveness of the personality in narcissistically vulnerable persons and their anticipatory anxiety in the face of impending fragmentation experiences. He drew attention to specific narcissistic transferences, underscored the role of empathy in the analyst's access to intersubjective reality, and noted the devastating effect on personality cohesion of empathic breaks within the therapeutic setting itself. Kohut made a major advance in our conceptualization of the therapeutic process by emphasizing that such fragmentation occurs not just following gross rejection but also with unempathic or emotionally withdrawn transactions occurring (and often unacknowledged) in the analytic process. These wounding interactions repeat and compound the traumatic empathic failures and deep humiliations that narcissistically vulnerable patients have suffered in early childhood.

Many have argued that these phenomena had been described previously, but Kohut's views of pathology blended in a unique and integrated fashion into an overall theory of therapeutic technique and change. Debate, even in psycho-

analytic circles that acknowledge Kohut's contribution as significant, still waxes hot over whether his discoveries combined to form the core of a self psychology, psychoanalytic in origin, but superseding the basic psychoanalytic model, or whether these discoveries expand a still central basic model and only deepen our knowledge of psychoanalysis and its specific applications to narcissistically vulnerable persons.

Those who see Kohut's contribution as enriching but not supplanting the basic model of psychoanalysis see many so-called discoveries of the self psychology movement (e.g., emphasis on empathy or intersubjective reality) as claiming originality for outlooks that have long been part of standard psychoanalytic practice. These mainstream psychoanalysts see the more radical self psychologists as attempting to burlesque the truly psychoanalytic sense of "resistance," evade the theoretical complexities of the problem of anxiety, and overlook important contributions to psychoanalysis by the field of child development. "Resistance" always connotes an emphasis on the patient's self-sabotage in avoiding the type of self-understanding necessary to clarify failures at his or her own projects, including the therapeutic enterprise. The patient's "resisting" the interpretive formulations of a blaming and unempathic analyst is an entirely nonpsychoanalytic usage of the term. Resistance is a type of self-deception in the service of reducing disorganizing affect, of which "fragmentation anxiety" is only one type. Self psychologists have often presumed, without recourse to data from developmental observation, that fragmentation anxiety is somehow more basic than other types of psychic disruption.

Self psychologists emphasize the uniqueness of the perspective provided by the self psychological point of view. For example, self psychology recognizes specifically narcissistic transferences and has a deep understanding of the disorganizing and arresting effects of empathic failure and the direct relationship of these insights to the data from the therapeutic process itself without theoretical formulations derived from ego psychology or metapsychology, which have a dubious relationship to strictly clinical data.

Progress in Self Psychology is a forum for the self psychological point of view that attempts to elaborate and extend the implications of Kohur's basic insights. The 18 chapters in volume 1 include contributions by the better-known authors in the self psychology movement.

The section entitled Defense and Resistance, the most contended theoretical area between mainstream psychoanalysis and self psychology, begins with a summary by Morton Shane of Kohut's "The Self Psychological Approach to Defense and Resistance," followed by commentaries by Shane, Paul Tolpin, Bernard Brandchaft, and Jerome Oremland. This part of the book suffers considerably from a lack of common clinical material for the discussants to respond to. The result is a series of interesting commentaries that fails to achieve a focus on the many-faceted nature of resistance in its truly psychoanalytic sense. Nothing about any of the discussions points to any incompatibility between an empathic analytic stance centered on awareness of intersubjective phenomena and an appreciation and interpretive handling of the styles that patients characteristically use to diminish their awareness of painful reality and hence sabotage their own projects in the service of avoiding overwhelming tumult. I would have liked to have read discussions by the same four discussants that included reactions to the vivid, clinically detailed papers by Jule Miller and John Hall.

The volume contains other sections: Memories of Heinz

Kohut, Interpretation and Self Psychology, Clinical Papers, and Theoretical Papers. The best chapters are clinically rich and grounded in a firm appreciation of psychopathology. The outstanding chapters by Jule Miller (on Kohut's method of working), by John Hall (on the idealizing transference), and by Robert Stolorow (on inner conflict) are vivid, clinically convincing papers with both practical and theoretical significance for a wide range of therapists. Samuel Wi son's contribution on the neglected topic of self-pity is timely and important, as is Howard Bacal's paper on optimal responsiveness. Some of the chapters attempt to portray differences between self psychology and mainstream psychoanalysis by using straw men, comparisons with poor treatment, or comparisons of self psychology with points of view that nobody really holds. No one advocates rough or unempathic treatment of patients or interpretation other than from an intersubjective viewpoint. The weaker chapters reflect a tendency to deify Kohut and reify his key concepts w thout question. The volume's limitation in scope is reflected by the fact that nine of the 18 chapters are authored by members of the editorial board of the series. Despite these shortcornings, the series has started with an important, state-of-the art, high-quality volume that will provide both initiate; and newcomers with an up-to-date overview of this new and controversial field.

MELVIN R. LANSKY, M.D. Los Angeles Calif.

Essential Papers on Object Relations, edited by Peter Buckley. New York, New York University Press, 1980, 468 pp., \$50.00, \$22.50 (paper).

Fealty to Freud has let stand some of the most cumbersome terminology in our field. In an era when psychoanalytic journals treat libido theory with skillful neglect and attention is shifting toward the primacy of innate affect mechanisms as the basis for the intense and complex forms of interaction between neonate and mother, it seems almost quaint to speak of the "other" person in a relationship as the "object" of the drives. Despite the fact that none of the modern observers of infant and infant/mother behavior has found any evidence that early in development there is a period of narcissism (during which libido energy is attached to the self), object relations theory demands that libido be detached from the ego and hooked to the object. Alternative y, the other person may become the object of the drive hunger and internalized by oral incorporation.

In this book Peter Buckley has assembled in chrono ogical order those contributions responsible for the tortured and tortuous language used by psychoanalysts to explain who we are to each other. Buckley's own contributions, four brief but excellent essays, draw the others into a coherent whole. All the great names are represented here: Freud, Klein, Fairbairn, Bowlby, Mahler, Winnicott, the Sandlers, Jacobson, and more. The reader comes to understand the shift from Freud's view of the psyche as an apparatus that handles biological instincts external to the ego, through Klein's idea of a personal internal world constructed from internal representations of the ego's relationships to the object of those instincts in the outside world, to Fairbairn's replacement of instinct theory with a construct declaring that the primary goal of the infant is to seek relationships with others.

Throughout these famous writings, however, is a pro-

found pathomorphic bias, as if no interaction need be internalized unless it is somehow painful. One sees everywhere the errors into which psychoanalysis was drawn by its attempt to understand the normal child as "revealed" in the analysis of unhappy adults. Although Freud's schema of psychosexual development has considerable heuristic value in psychoanalytic treatment, it is regularly disconfirmed by contemporary investigation. To the extent that object relations theory is an extension of Freud's adultomorphic view of the drive-ridden infant, it too must now undergo massive reorganization. Even Bowlby's idea of an attachment system does not hold up in the light of modern studies of interaffectivity, and Mahler's extraordinary extension ("normal infantile autism") of Freud's concept of infantile narcissism falls immediately into disrepute when one studies facial interaction between healthy neonates and their mothers videotaped at home or in homelike settings. Only in the paper by the Sandlers do we see recognition that human motivation and intrapsychic conflict are inextricably intertwined with the affective component of life as reflected in interactions between the self and others. Kernberg's paper, "Structural Derivatives of Object Relationships," in which he introduces the idea that "borderline" patients use "splitting of the ego" as a defense against a variety of conflicts stemming from pathological object relations, must also be reevaluated in terms of our new attention to the affects, for most of his examples of splitting can be explained as responses to shame—an emotion hardly mentioned in this classic paper.

Only reviewers are required to slog through such a volume in its entirety, because books like this are designed as source material for students. (Someone else should have done so, however, if only to weed out the unusual number of errors in typesetting.) I found the final essay, Guntrip's posthumously published account of his analyses with Fairbairn and Winnicott, utterly charming in its openness and honesty. Notwithstanding Guntrip's explanation of the importance of object relations theory to the doing of psychoanalysis, one is led to the inescapable conclusion that psychoanalysts are people first and that their work is a reflection of their humanness. Best to end with Guntrip's final sentences, which conclude the text: "To find a good parent at the start is the basis of psychic health. In its lack, to find a genuine 'good object' in one's analyst is both a transference experience and a real life experience. In analysis as well as in real life, all relationships have a subtly dual nature. All through life we take into ourselves both good and bad figures who either strengthen or disturb us, and it is the same in psychoanalytic therapy: it is the meeting and interacting of two people in all its complex possibilities" (p. 467).

DONALD L. NATHANSON, M.D. *Philadelphia*, *Pa.*

FAMILY THERAPY

Systematic Family Therapy, by Luciano L'Abate. New York, Brunner/Mazel, 1986, 336 pp., \$30.00.

Teachers, clinicians, and therapists are all aware that there is an urgent need for an integrative text in the field of family therapy. Although most family therapists describe themselves as "integrative" or "eclectic" and most teachers do, in fact, teach a multitheoretical approach using papers or chapters from a variety of schools, the field appears to be

dominated by a rather small number of peripatetic performers, often charismatic, usually the founders of a particular school, whose tapes and interviews at conferences remain a lodestone for students and an exemplar of what one should strive to emulate. Thus, it would be expected that a second generation of books with the purpose of being comprehensive or systematic would appear to fill the gap between the founders and the current generation. And, indeed, such books are now being published, some of them compendia including chapters from a large number of approaches and some that endeavor to integrate them.

This book is an example of an effort to integrate the various theoretical and therapeutic approaches to treatment of couples and families. It is, unfortunately, a poor book for a variety of reasons. The first is that it is unreadable. In the very first sentence of the acknowledgments, L'Abate expresses his "debt of appreciation to Dr. Carl Whitaker who, in reviewing a summary paper of the present work described it as . . . 'boring.'" Dr. Whitaker was right; the book is deadly boring, reading as though it were a collection of summaries of articles.

Second, a book that undertakes to integrate many theories of therapy almost requires clinical examples to demonstrate concretely what the author means by the theory. This book has none and piles one abstraction on another.

Third, the author is testing hypotheses and specifically proposes the use of "systematic homework assignments," which are given in the appendixes for couples and families. One wishes that the author, who emphasizes the importance of generalization from the office to the home, had generalized his perspective on research to his own book. He states that "in some instances, these systematic homework assignments seem to succeed when other approaches seem to fail ... sometimes [they] were useful in getting couples unstuck" and that the results of his research will be published in the future. A therapeutic approach that emphasizes outcome as a criterion should report outcomes. Publication of the theory should occur after, not before, publication of the research.

This book is perhaps best viewed as an example of the effects of publish or perish on our field. In the last 4 years, this volume aside, L'Abate has either authored or edited five other books. In view of the fact that he has many interesting ideas and is unusually well versed in family therapy, it is sad that this book cannot be recommended.

Finally, this book is an excellent example of a serious failing in the family therapy literature—namely, the publication of articles advocating particular clinical techniques with examples of only their successful use. The reader is left without any sense of the types of situations for which the technique is valuable and when it is likely to fail or even be harmful. Often the technique is used to buttress a particular theory. Madanes, Selvini-Palazzoli, and Haley are prominent examples of this approach, which is making advances in family therapy. An excellent antidote might be to require papers advocating particular clinical methods to describe 10 consecutively treated cases. After all, Freud described his first five cases in *Studies on Hysteria* (1).

REFERENCE

 Breuer J, Freud S: Studies on Hysteria (1893–1895): Complete Psychological Works, standard ed, vol 2. London, Hogarth Press, 1957

HENRY GRUNEBAUM, M.D. Cambridge, Mass.

Parenting Across the Life Span: Biosocial Dimensions, edited by Jane B. Lancaster, Jeanne Altmann, Alice S. Rossi, and Lonnie R. Sherrod. New York, Aldine de Gruyter, 1987, 456 pp., \$45.95.

This book is the second in a series sponsored by the Social Science Research Council's Committee on Biosocial Perspectives on Parent Behavior and Offspring Development. The four editors, all of whom are members of this multidisciplinary committee, have done a magnificent job of organizing and synthesizing all of the recent research on parenthood throughout the life cycle into a state-of-the-art volume. The 23 contributors are scientists from the disciplines of anthropology, sociology, psychiatry, human development, family studies, primatology, history, biology, psychology, psychobiology, and gerontology.

Parenting Across the Life Span is divided into an introduction and four sections. The introduction is brief and gives a nice overview of the entire work. The editors define and explain the term "biosocial perspective" as it pertains to life-span research in parent behavior. They also emphasize the commitment of this perspective to recognition of the continuous, mutual, and inseparable interaction between biology and social behavior. This unifying theme runs

throughout the book.

Section one, Parenthood and the Life Span, contains two well-written papers. Altmann's paper on reproduction and parenting behavior of anthropoid primates is interesting but less clinically relevant than Rossi's paper on parenthood in transition. Rossi reviews how parenthood is changing in Western societies. She looks at demographic trends in marriage, divorce, remarriage, fertility, longevity, and household composition. In her criticism of the medicalization of obstetrics, she points to the need for research by developmental psychologists and sociologists in this branch of medicine. Her review of sex differences in parenting is excellent, especially its focus on nontraditional family forms and fathering. She introduces an integrated model of bioevolutionary theory and recent advances in neurosciences research.

Section two, Biosocial Perspectives and Parental Investment, includes three papers. Leon discusses evolutionary biology in mammals, in particular the somatic basis for beginning reproduction and the somatic responses to pregnancy and lactation. McKenna reviews the extensive and fascinating research on supplemental and surrogate care extended to nonhuman and human primate infants and the costs and benefits for all parties. Lamb et al. concentrate on human fathering and the father-child relationship in Western society. Their paper reviews the sex differences in procreation and provisioning, compares parental styles of fathers and mothers, explains paternal competence and sensitivity, and discusses the recent changes in the degree of paternal involvement and the underlying determinants of paternal involvement in contemporary families.

Section three, Human Variation Through Time and Space: Historic Change in Human Parenthood, contains five papers. Lancaster and Lancaster present an anthropological analysis of the evolution of the human family and how parental investment has been shaped by environmental resources. Draper and Harpending continue this trend in their discussion of the interplay between biological factors, which favor close and intense parent-offspring interaction, and factors that favor dilution or weakening. Weisner reviews caretaking by siblings and compares non-Western and Western societies in the development and acquisition of parenting skills.

LeVine and White discuss the meaning of children to a society and the shift from agrarian to urban-industrial institutions from the eighteenth to the twentieth century. Finally, Vinovskis gives a historical perspective on parent-child interactions in the family from the seventeenth to the nineteenth century in England and America. Her interesting paper touches on the subjects of child abuse, abandonment, infanticide, the turmoil of adolescence, the intellectual capabilities of young children, and parental control of children throughout this period in history.

In section four, The Life Span and Parental Investment in Modern Society, there are five chapters. Hogan's paper on demographic trends in fertility and parenting across the life span is full of data on sex and racial differences in marriage, childbearing, premarital parenthood, divorce, and so forth. Blake's paper reviews the research that documents higher cognitive ability and educational attainment in children from families of small "sibsize." Lerner and Lerner, in a wellwritten and relevant chapter, explain the "goodness-of-fit" model, which is essential to a full understanding of how children adapt or do not adapt to their sociocultural context. The last two papers, by Hagestad and Bengtson, address the under studied reciprocal relationship of aging parents and their adult children, including grandparenting and intergenerational continuity. Never before in the history of humankind have parent-child ties been so enduring.

This volume, encyclopedic in breadth, is a comprehensive and completely up-to-date reference work on the biological and psychosocial aspects of parenting. It will be of more interest to academic psychiatrists and students of the life cycle than to everyday clinicians.

MICHAEL F. MYERS, M.D. Vancouver, B.C., Canada

Familiar Realities: The Heidelberg Conference, edited by Helm Stierlin, Fritz B. Simon, and Gunther Schmidt. New York, Brunner/Mazel, 1987, 227 pp., \$25.00.

The Heidelberg Conference, celebrating the 10th anniversary of the Family Therapy Department at that university, was attended by 2,000 participants and led to this book. It contains addresses by well-known family therapists, a case discussion, and an adaptation of *Hamlet* with many of the "luminaries" present typecast. The opportunity to speak at such a worldwide gathering led the speakers to become less clinical and more philosophical than usual, less often adventurous and more abstruse. For those not present the absence of the excitement of being there was dealt with by the editors, who write fictional interludes. These conversations of three imaginary participants who discuss the conference from contrasting perspectives, unfortunately, lack artistic verisimilitude.

Contrary to the dust cover statement that "Familiar Realities... provides a rich and varied collection of new theoretical and practical ideas," none of the principal speakers says anything he or she has not said far better elsewhere, and there is hardly a practical idea in the book. The case discussion lacks depth, and to enjoy the Hamlet one must know the therapist-actors well enough to appreciate the unusually skillful casting of the play.

Doubtless some of the participants will want this book as a souvenir of a very enjoyable conference. Those who were not there should and probably do know that the speakers and the editors have written important books and papers that are a vital part of the family therapy literature. This book is, unfortunately, not their best work.

HENRY GRUNEBAUM, M.D. Cambridge, Mass.

MARITAL THERAPY

Intimate Partners: Patterns in Love and Marriage, by Maggie Scarf. New York, Random House, 1987, 409 pp., \$18.95.

Probably the best testimonial to Maggie Scarf's latest book is that the *Atlantic* ran a prepublication article by her last fall. On reading this superb, and very popular, two-part article (November and December 1986) I was eager to read her book.

Scarf does not disappoint. She writes with the same clarity and authority as she did in Unfinished Business (1), her highly respected and penetrating analysis of women and depression. Scarf's research for Intimate Partners was extensive and of several years' duration. Not only did she interview many experts in the field of marital and sex therapy, she also participated in the master's degree program in marital and family therapy at the Smith College School of Social Work and took courses at the Family Institute of Westchester, Mount Vernon, N.Y. Her "field work" included talking with more than 200 couples, some of whom were patients in a clinical setting and some of whom were nonpatient volunteers, plus extensive interviews with 32 couples for a minimum of six 1-hour sessions each. She completed the writing of this book while a fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University in 1985–1986.

In her introduction, Scarf decries the common assumption about marriage that it is not necessary to *learn* anything about working out a satisfying relationship with an intimate partner—i.e., it will or will not just happen. Her aim in this work is to make clinical information that is known about marriage "accessible to those who most need and want it—married people who want their lives together to be as joyful and mutually rewarding as they can possibly be." She accomplishes her mission admirably by discussing and explaining the contributions of the major marital and family theorists in straightforward, jargon-free language. She then illustrates these ideas and concepts with the prose of a novelist as she highlights her observations of the couples she interviewed in depth.

The substantive content of the book is progressive throughout the marital life cycle: how individuals become a couple and the importance of the past, achieving a balance of autonomy and intimacy in marriage, emotional triangles and marital infidelity, common communication and sexual problems in marriage, launching children, and adjusting to each other after children leave. Scarf's explanation and repeated demonstration of the common process of projective identification in couples cannot be beat. She also emphasizes throughout the book the wisdom of constructing detailed family genograms to truly understand couples in distress—a position well taken in this era of marital breakdown, divorce, remarriage, and stepfamilies.

This is a book for a wide audience. It will complement the academic publications in marital and family therapy and will be of interest to residents, teachers, and clinicians in this branch of psychiatry. Marital therapists will want to recommend it to their patients. Most of all, anyone who is curious

about marriage, whether married, formerly married, or considering marriage, will love it.

REFERENCE

1. Scarf M: Unfinished Business: Pressure Points in the Lives of Women. New York, Doubleday, 1980

MICHAEL F. MYERS, M.D. Vancouver, B.C., Canada

Marital Therapy in Psychiatric Practice: An Overview, edited by Linden F. Frelick and Edward M. Waring. New York, Brunner/Mazel, 1987, 224 pp., \$25.00.

This book is a primer on the subject of marital therapy and so, except for a chapter reviewing and discussing the literature on outcome studies, may be of limited interest to a fully trained psychiatrist. It records the proceedings of a 2-day conference on marital therapy in psychiatric practice held in Canada in June 1984, with contributions by 11 psychiatrists and three social workers.

I felt as if I were reading an abridged version of books on psychotherapy I had read a generation ago. For example, a volume entitled *The Psychotherapies of Marital Disharmony* (1), based on a 1964 panel on the subject at the meeting of the American Orthopsychiatric Association, covers essentially the same conceptual ground but with greater complexity. That volume includes a discussion of the classical psychoanalytic approach to marital discord by Giovacchini. This new book has a chapter on transference and countertransference that, in effect, simplifies those psychoanalytic concepts by using interactional terms such as "union" and "competition" rather than "fusion" and "introjection."

There are chapters on indications for treatment, the initial assessment, motivation, types of approaches, and combinations of techniques. These are written clearly, simply, and concisely as the authors touch on the contributions of Ackerman, Bowen, Framo, Whitaker, and other pioneers of marital and family therapy. Paul M. Cameron, who is a professor of psychiatry at Queen's University, makes the statement that Canadian psychiatrists tend not to follow charismatic leaders and are more eclectic and less doctrinaire than "some other parts of the psychiatric community."

The chapter I found most valuable is on outcome research, written by Cameron. A survey of 200 studies of marital and family therapy suggests that two-thirds of marriages are improved by any kind of psychotherapy, but no one has yet been able to design a scientifically valid way of studying outcome or even comparing the various studies. Marriage is not an illness that has research diagnostic criteria. Cameron's advice is to follow "multiple pathways to more effective interventions." I believe he means that although we cannot adequately study outcome of psychotherapy when we cannot define what it is we are treating, we can test specific hypotheses about the usefulness of certain interventions in modifying specific elements of a dysfunctional marriage.

REFERENCE

 Greene BL (ed): The Psychotherapies of Marital Disharmony. New York, Free Press, 1965

WILLIAM R. FLYNN, M.D. Napa, Calif.

CHILD PSYCHIATRY

Depression in Young People: Developmental and Clinical Perspectives, edited by Michael Rutter, Carroll E. Izard, and Peter B. Read. New York, Guilford Press, 1986, 519 pp., \$37.50.

Twenty-five years ago the preponderance of clinical lore suggested that children are inherently incapable of experiencing depression. This view may have arisen in part from the misapplication of various dynamic theories as well as from persistent denial on the part of psychiatrists and other professionals. Most of us who care for children are on some level motivated by a sense of hope and optimism that may be seriously challenged by the presentation of a severely depressed child. Nonetheless, the weight of clinical evidence and the inexorable reality of childhood suicide have by now shattered our denial. We have become more cognizant of the often subtle effects of depression on academic and vocational performance and family dynamics. At the same time, the contributions of Beck, Puig-Antich, and others have demonstrated the power of new methods of treatment of this condition. Depression, especially in childhood, cannot be adequately addressed from narrow somatic, cognitive, or interactive perspectives because it may be both cause and effect of phenomena in all these sectors.

This volume, coming after a period of great advances in practical clinical knowledge, is a masterful elaboration of a truly holistic view of depression. It arose from a symposium held in 1982 by the Social Science Research Council's Committee on Social and Affective Development During Childhood. The aim of the symposium was to address the gap between developmental and clinical perspectives of depression. (Many developmentalists who are not clinically inclined have failed to differentiate between depressive affects and depressive disorders. Similarly, many clinical researchers have not addressed the manner in which development might affect the expression of clinical pathology.) Unlike many works emerging from conferences, which prove to be loosely organized compilations of divergent presentations, this book is a comprehensive, well-organized survey of its field.

The first two sections cover, respectively, the developmental psychopathology of depression and developmental perspectives in theory and research. They contain contributions by world authorities in these areas, including Rutter himself, and will provide a thoughtful introduction to the developmental perspective for clinicians accustomed to addressing the phenomenological here-and-now. Sections three and four address parental depression as a risk factor and other risk indexes and mechanisms. The essays herein will be more immediately accessible to clinicians and may be enlightening to nonclinician researchers as well. In section five, Methods and Measurement, Carlson and Garber and Maria Kovacs discuss the underlying issues in the elaboration of their systems of describing and assessing depression. At the end of the final section, Rutter provides a chapter entitled "Depressive Feelings, Cognitions, and Disorders: A Research Postscript," which is a masterful reprise of some of the ideas offered earlier in the text, with suggestions for future research directions. Such an essay is of obvious interest to scientists. It is also of value to clinicians, who must constantly ask what it is that we really know.

The same can be said for the whole book. It is not of use as a clinical "cookbook" or as a casual introduction to the field. Its chapters are rich in content and demand careful attention. We clinicians who read this book will derive an enhanced understanding of the perspectives of our researcher colleagues, and vice versa. We will all be guided toward new directions of inquiry by this seminal work.

WILLIAM M. KLYKYL(), M.D. Cincinnati, Ohio

The Suicidal Child, by Cynthia Pfeffer. New York, Guilford Press, 1986, 318 pp., \$29.95.

Pfeffer successfully accomplishes three things with this book. First and foremost, she convincingly dispels any myths regarding the inability of preadolescent children to experience suicidal ideation or to formulate and execute lethal plans. Second, most readers will come away from this book with a heightened index of suspicion for suicidal behavior in children, as well as some valuable scales with which to assess such behavior. Finally, the author provides such a broad overview of the suicidal child from many different perspectives that important unanswered research questions are quite clearly spelled out. These gaps in our knowledge may serve to provide direction for future research in this field.

The book is divided into four sections: 1) Clinical Descriptions and Epidemiology of Childhood Suicidal Behavior, 2) Risk Factors for Childhood Suicidal Behavior, 3) Assessment of Suicidal Risk, and 4) Intervention for Suicidal Behavior. The general design of each chapter is to present the important points interspersed with clinical vignettes and to finish with a summary of all major issues covered. There are several chapters that will be of interest to even the experienced child clinician, but many of the chapters are too rudimentary to warrant that description.

Within the first and second sections, there are three chapters that are generally worth reading by anyone interested in suicidal children. One is a chapter describing the suicidal episodes of children and is recommended because it provides some insight into the characteristic components of suicidal episodes, the ego functioning of the acutely suicidal child, and the spectrum of suicidal methods used by children. There is also a relatively good review of affective disorders in children in the second section and an interesting chapter on children's concepts of death. The latter discussion gives an overview of what little is known about the development of the concept of death in normal children and contrasts this with the notions of death found in suicidal children.

Section three, on assessing suicidality in children, is perhaps the most well-developed portion of the book. In this section, the reader will find specific suggestions for evaluating a child for suicidal behavior as well as a thoughtful discussion of countertransference issues elicited in diagnosing and treating the suicidal child. The third sect on also includes a chapter describing some atypical characteristics of suicidal children's play.

Unfortunately, the remaining chapters, including all of those in the fourth section, are somewhat elementary discussions of various aspects of the suicidal child. For example, the descriptions of suicidal children's families and the therapeutic alternatives useful in managing suicidal children essentially could apply to many psychiatrically disturbed children, suicidal or not. Although the author consistently emphasizes that concern for the child's safety should always be present when managing the suicidal patient, she does not otherwise satisfactorily elaborate on how (or even if, suicidal children are different from other disturbed children.

Why the book is so inconsistent in its depth of coverage is unclear. Part of the explanation may lie in the elusive nature of the subject matter. Throughout the book, there seems to be some confusion as to whether suicidality is a symptom or a unique diagnostic characteristic. The implication is that suicidal children are a unique group with distinctive characteristics, such as specific types of family interactions, diagnoses, ego functions, cognitive states, play, treatment modalities, and prognoses. Unfortunately, the author is able to convincingly provide evidence for diagnostic singularity only on the basis of play, concepts of death, and the predominant (although not exclusive) presence of affective disorder.

Some of this confusion may be the result of the author's assertion that the spectrum of suicidal behavior (i.e., ranging from ideation to lethal attempts) is not only a spectrum but a continuum. Consequently, she often groups all children with any type of suicidal behavior together, although, at times, she does make a distinction between aggressive and nonaggressive children. Therefore, in her descriptions of family patterns, ego functioning, treatment modalities, etc., she is referring to a very heterogeneous group. The result is that in certain portions of the book, she can make only general and apparently superficial comments about understanding and treating these children, comments reflecting the heterogeneity of the group she is describing. One finishes the book with a quasi-conclusion that we are not sure is either accurate or intended—that suicidality is a symptom of many different types of patients and that, except for continually assessing and providing protection from suicidal impulses, these patients should be treated in the same eclectic way one would approach any other heterogeneous patient group.

This is not to trivialize Pfeffer's most important contribution. Whatever its shortcomings, the book makes a convincing argument that any suicidal behavior (including ideation) in children should always be taken seriously and continually reassessed. This book will make a valuable contribution to the training of anyone working with children (e.g., psychiatric residents, pediatric residents, other mental health professionals), and the scales provided for assessment of suicidality will be useful additions to the diagnostic protocols in most child outpatient or inpatient settings. The experienced child clinician, however, will probably benefit most from a selective reading of this text.

JAMES F. LECKMAN, M.D. KATHLEEN PAJER, M.D. New Haven, Conn.

Young Children in Family Therapy, by Joan J. Zilbach, M.D. New York, Brunner/Mazel, 1986, 173 pp., \$25.00.

Family therapists, no matter what their theoretical orientation, are committed to treating the family as a whole. This general credo notwithstanding, few family therapists actually include children in family therapy meetings if they are young enough that their primary mode of expression is not verbal. What is more, the exclusion of young children is usually not made following conscious deliberation about the most appropriate unit to attend sessions: "The family therapist's decision to see parents and not children can be a deliberate act of omission with a particular, therapeutic goal . . . but usually this omission occurs by default in intention or other unrecognized attitudes on the part of the therapist. Deliberate omission implies that considerable attention and planning has occurred" (p. 20).

Joan Zilbach's concise text, accompanied by many wellselected photographs and examples of children's drawings, explores and sets out to correct this problem. The early part of the book documents convincingly both the prevalence and the significance of exclusion of young children from family therapy. Zilbach stresses the critical function of young children in family therapy: 1) as the problem or the "tip of the iceberg," making family dysfunction visible, 2) as pointing "beyond the tip of the iceberg" to problems that extend beyond the difficulties of the identified patient, 3) as allies and cotherapists highlighting the central issues in treatment or the adults' wish to avoid treatment, 4) within the therapeutic situation as harbingers of newly developing family difficulties, and 5) as vital components of the whole family interaction. These critical functions are elaborated by means of photographs of family sessions and samples of children's drawings. Lengthy discussion of a case treated through the period of parental separation and divorce highlights Zilbach's thesis with moving "commentary" on the process provided by children's drawings gleaned throughout the treatment. There is a clearly written and well-illustrated chapter on the therapist's handling of greetings, supplies, messes, trips to the bathroom, pictures, and celebrations and holidays which is not merely a how-to chapter but also a reminder that those of us who are not trained child psychiatrists risk being intimidated by inexperience and ignorance in the face of such situations and may rationalize such uneasiness with slogans such as "I can't see children in my office" (p. 66). The therapist's uneasiness can be expected to buttress parental objections; e.g., "They will miss arithmetic class if they come to family therapy" (p. 67) or objections from children themselves: "My sister is nuts—not me" (p. 68). The "how-to" section underscores Zilbach's message that exclusion of children from family therapy is rarely a deliberate decision but usually a rationalization for avoidance of situations that pose difficulties and uncertainties for the therapist.

Despite its simplicity, this book is both hard hitting and unique. In my opinion, most family therapists who read it will realize that they treat cases in which they are far from therapists for the whole family and that the "decision" to exclude young children from family therapy is based on their uneasiness and inexperience with nonverbal expressions. I would recommend this excellent little book to every family therapist and every child therapist regardless of theoretical orientation or experience.

MELVIN R. LANSKY, M.D. Los Angeles, Calif.

The Psychoanalytic Study of the Child, vol. 40, edited by Albert J. Solnit, M.D., Ruth S. Eissler, M.D., and Peter B. Neubauer, M.D. New Haven, Yale University Press, 1986, 568 pp., \$45.00.

As in the past, the 40th volume of this annual presents some of the most thoughtful and penetrating contemporary work in psychoanalysis. Over the years, contributors have included most of the major figures in psychoanalytic leadership. There has been a consistent structure to the volumes over the years, including components devoted to theory, clinical observation, and applications of psychoanalytic concepts to other intellectual and aesthetic areas. In the past, typical perhaps of other readers, I have read selectively in a given year's volume, perusing and choosing from the many

offerings those papers most relevant to my own work and interests. Reviewing this volume provided an opportunity to journey through the entire contents and thereby discover the vast terrain covered.

The seven papers in the first section, Development, consider several different theoretical and clinical perspectives. The first paper, "Internalization and Psychological Development Throughout the Life Cycle," is a substantial contribution by Behrends and Blatt. This is a superb discussion of internalization and its role in normative development. Within this clearly reasoned paper are complex, nonreductionistic arguments, considerations of adult development, and careful attempts to characterize "relational" dimensions in development. A second paper in this section examines influences of siblings on development, a topic that has in the past received far less attention in the literature than have parental or more general family influences. In recent years, child development studies, such as that of Dunn and Kendrick (1), have taken up the impact of siblings on development. Lichtman presents detailed observations regarding how an older child may shape the individuationseparation process of a younger sibling. He also raises reservations about his argument, citing such issues as the problematic status of generalizations based on a single case, the difficulties of developing a theory based on "normal development," and the potential oversimplification of complex sibling relationships, particularly omissions of how they interact with parental attitudes and relationships. As is true of all of the papers in this volume, Lichtman's contribution is best seen as hypothesis generating rather than as demonstrating or proving a particular point or theory. The hypotheses must await larger-scale studies of normative or pathological development using the appropriate statistical controls and systematic observations. In saying so, I am not criticizing this or the other papers. Almost all readily acknowledge that their thrust is toward intensive exploration of a given point or new speculations.

In the second section, Clinical Papers, we again find a striking array of observations and formulations. As in the previous section, the papers are uneven. Some are outstanding with respect to their accessibility as well as the degree to which they open the way toward new observations rather than iterate old and not very fruitful debates. An especially impressive paper in this section is Brenner's on what adult analysis has contributed and has to contribute to child analysis. In his short but incisive "voyage of discovery," Brenner entertains a number of ways in which understandings from adult analytic work may inform and stimulate certain developments within child analysis.

Two other notable papers in this section are about fantasy. Kennedy et al. discuss ways in which fantasy changes in the course of development, becoming subjected to more complex defensive activity and other ego activities and serving various adaptive roles. The second paper on fantasy, by Yorke, is a brief examination of the body-mind problem and its possible relation to fantasy productions. This contribution is an introduction to the vast philosophical as well as scientific question of links between somatic and psychological phenomena. A motif running through many of the papers is particularly clear in Yorke's—namely, the importance of recognizing complex observations and theory while framing distinctions and underlying constructs as clearly as possible. Yorke concludes that "questions of this kind serve as a rather severe reminder that turning one's back on complexities in the interests of order and convenience may simplify tasks, but does little to solve problems" (p. 323).

In each of the first two sections, then, there are outstanding contributions supporting the idea that detailed clinical observation can both expand theory and stimulate new empirical studies. It is in the final section, however. that I found the most originality and excitement. This section, Applied Analysis, includes papers that enrich our understanding in many realms: unusual forms of psychotherapy, adoption, children raised by fathers, and the psycho ogy of the supernatural. The papers here are of a consistent'y high caliber and focus on the interplay of psychoanalytic perspectives with other academic and aesthetic perspectives. In fact, I was struck by the very optimistic and hopeful feeling I had in reading these papers. Loewald presents a sensitive, careful discussion of a clinical research project involving children with the "failure to thrive" syndrome and their parents. In addition to discussing a series of cases, she offers analogies to the treatment and psychodynamics of severely disturbed adults. Nickman provides a lucid discussion of the kinds of losses that are experienced by adopted children and the different needs of both adoptive parents and these children for help in resolving the complex and often severe difficulties that arise from their unusual situations. Pruett describes a clinical research study of the development of children from infancy in households where the father was the primary nurturing figure. In the light of the many new family structures evolving today, such detailed observation is innovative and at the same time modest. Pruett recognizes that his are early and highly suggestive data that must row be supplemented by observations from his larger sample as well as other observations, such as more detailed data about

Other fine papers from this section include an almost lyrical piece by Silbermann, "On Happiness," an essay on the nature of an affect that is infrequently discussed in the psychoanalytic literature. Silbermann lucidly examines the nature of those "rare moments when harmony and near-optimal balance are achieved." Finally, one of the very best papers in the volume is by Terr, already well-known for her observations of psychological trauma in children. She presents an analysis of experiences of the "supernatural and their relationship to post-traumatic experience," dist nguishing five aspects of posttraumatic mental functioning in adults and children, "which may account for some supe natural experience." These aspects include "intensively vivid memories of perceptions of a traumatic event," posttraumatic hallucinations that create "ghosts," and intrusions of whole images after traumatic events appearing as "possessions." Terr draws on many illustrative clinical examples along with relevant ghost and horror stories, resulting in a cogent, well-reasoned, and rich exploration that is an especially original contribution.

We have, then, yet another outstanding volume in a series that has now continued for more than four decades. I do not know why it is the third section, the applications, that is unusually attractive. Perhaps one reason is that the newest directions and the least redundant arguments and discussions appear in these papers. The editors have done a superb job of choosing nonreductionistic, thoughtful papers that demonstrate work occurring at the boundaries between psychoanalysis and other forms of knowledge. There is a tone of collaboration with other disciplines, an openness to new perspectives, that pervades these papers. Given the debate these days about the "validity" of psychoanalysis and its "scientific status," I think the papers in this book go a long way toward arguing that, at its best, psychoanalysis is certainly alive and developing.

REFERENCE

 Dunn J, Kendrick C: Siblings: Love, Envy and Understanding. Cambridge, Harvard University Press, 1982

STUART T. HAUSER, M.D., PH.D. Boston, Mass.

The Interpersonal World of the Infant: A View From Psychoanalysis and Developmental Psychology, by Daniel N. Stern. New York, Basic Books, 1985, 304 pp., \$23.95.

This is an illuminating and worthwhile book. It is also disappointing. Daniel Stern's original, updated work is imaginative and closely reasoned. His attempts to invent "working hypotheses about infants' subjective experiences of their social life" are stimulating but too adult-like, substituting one kind of jargon for another, and more likely to please developmental psychologists than clinicians. The author's efforts to use his psychoanalytic and clinical competence fail for three reasons: 1) He views infants more as learning than as maturing and developing persons (p. 45); 2) he artificially heats up a debate between developmental psychologists and psychoanalysts that does not serve either of them well; and 3) although he productively compares the observed infant (mainly by developmental psychologists) with the recreated clinical infant, he implies that his research and formulations will enable us to make more precise reconstructions of infantile experiences from the psychoanalytic treatment of adults.

Early in the book the author states that the developmental account described, "in which new senses of the self serve as organizing principles of development," is close to the accounts of Margaret Mahler and Melanie Klein "in that its central concern, like theirs, is for the infant's experience of self and other."

For clinicians he adds that "the greatest clinical value of the views put forth here lies in their suggesting strategies to aid in the construction of therapeutically effective life narratives." He says that the system he describes "urges a flexibility in theories about the developmental origin of pathology... by offering some alternative explanations for well-known events, thus presenting a wider range of possibilities, and by emphasizing a developmental view that focuses on search strategies rather than answers about the timing of clinical origins" (p. 273).

In the introduction Stern refers to four sources or paths of experience that motivated and influenced him in writing this book, his effort to invent the subjective world of the infant. These are 1) his training in and practice of psychoanalysis and psychodynamic psychotherapy, 2) current research in developmental psychology, 3) personal experience (as an infant he spent considerable time as a hospital patient) associated with a lifelong interest in and understanding of infants as persons in their own right, and 4) colleagues and friends who have encouraged, criticized, and helped him to shape the work that culminates in this book.

Stern is excellent at descriptions and able to use concepts that cannot be precisely articulated. At the least, this is paradoxical, because he is attempting to replace or reshape psychoanalytic concepts that lack specificity. For example, in his invention of the infant's subjective world or sense of self, he states,

By "sense" I mean simple ... awareness. We are speaking of the level of direct experience, not concept. By "of self" I mean an invariant pattern of awareness

that arises only on the occasion of the infant's actions or mental processes. An invariant pattern of awareness is a form of organization. It is the organizing subjective experience of whatever it is that will later be verbally referenced as the "self." This organizing experience is the preverbal, existential counterpart of the objectifiable, self-reflective, verbalizable self. (p. 7)

This way of approaching infant research runs the risk of losing sight of the child while seeking to be as careful as possible to describe what one is observing (and through observing, changing). Throughout the book Stern fails to warn the reader of how the experimental or less controlled observations and the use of videotaping influence the behavior of infants and their mothers. He also does not indicate how he has taken such distortions into account in his own inferential thinking.

Stern describes and defines what he means by the four senses of the self and their respective domains in infancy (0-2 years): l) sense of an emergent self and the domain of emergency relatedness (0-2 months), 2) sense of a core self and the domain of core relatedness (2-8 months), 3) sense of a subjective self and the domain of intersubjective relatedness (8-15 months), and 4) sense of a verbal self and the domain of verbal relatedness (15-18 months). Stern emphasizes that these capacities are not overtaken one by the other. The timetable is that of their time of appearance and the sequence in which they become available. Once they appear and unfold they coexist and are lifelong in their functioning. He attempts to replace the concept of critical phases of development by what he terms "sensitive periods," i.e., the initial periods of formation of each of the senses and their respective domains. (The use of words such as "domain," "to yoke," "emergent," "core," and "intersubjective" are given the weight of technical meanings, although the author tries to avoid the use of other jargon. Stern defines "domain" as 'sphere of influence or activity.")
In this way, he proposes to replace the concept of phases in

In this way, he proposes to replace the concept of phases in stages of development, especially the psychosexual phases of development formulated by Freud and elaborated in contemporary psychoanalysis through infant studies. Using a developmental psychology frame of reference and the concept of domain of relatedness, he suggests that his view of self psychology, as derived from the work of Kohut and his co-workers and adapted by himself, leads to a more valid outline of the four senses of self and their respective domains in infancy. Stern is convinced that the four senses and domains are closer to observable data in infancy and therefore more verifiable.

In expressing his preference for his own system of metaphors as being closer to observable and verifiable empirical data, the author defines and uses many psychoanalytic concepts too narrowly and mechanically—not as most child psychoanalysts would use such terms and concepts today. He uses psychoanalytic concepts mostly as straw men to buttress his preference for revised or different terms and concepts. This is most apparent with regard to psychosexual phases of development; instinctual drives; structural concepts of id, ego, and superego; reconstructions of the repressed past; trauma; and psychodynamic formulations regarding the diagnostic and therapeutic process. Stern indicates that basic clinical issues should be viewed as life-span issues and not as developmental phase issues. However, as he formulates them, such concepts are not mutually exclusive.

Stern makes an important contribution by enabling readers to know and think of infants as persons in their own

right. At the same time, he disappoints us by not emphasizing the consequences of the relative helplessness and dependency of such young children. This leads to an imbalance in a scientific view of infants. A balanced perspective requires experts on infants to keep in mind how infants can respond to, influence, and shape their personal environment as well as how they become deeply adapted to, dependent on, and attached to the adult or adults who "save their lives" by providing them with food, warmth, affection, safety, and stimulation in the continuous context of a powerful, gradually changing set of social and body-care expectations. Freud

pointed this out lucidly and dramatically in "Inhibitions, Symptoms and Anxiety" (1).

REFERENCE

 Freud S: Inhibitions, symptoms and anxiety (1926), in Complete Psychological Works, standard ed, vol 20. London, Hogarth Press, 1959

> ALBERT J. SOLNIT, M.D. New Haven, Conn.

Reprints of Book Forum reviews are not available.

Clonazepam in the Treatment of Chronic Schizophrenia

SIR: Since the report of Karson et al. (1) on the use of clonazepam in a sample of psychiatric patients and the dismal results noted there, the usefulness of the drug has been noted in a number of cases and for a variety of symptoms (2–4). We would like to describe its benefits in two patients who were chronically ill with schizophrenia.

Ms. A, a 51-year-old white woman, was hospitalized for acute decompensation of a chronic paranoid schizophrenic illness of at least 10 years' duration which had been unresponsive to antipsychotics, lithium, and benzodiazepines. She was started on trifluoperazine, but its sedative effect made it difficult to raise the dose beyond 5 mg/day. An oral dose of 300 mg b.i.d. of lithium (which resulted in a level of 0.6 meq/liter) was added, with some improvement. However, Ms. A still demonstrated a florid paranoid state with prominent somatic delusions. Clonazepam, 0.25 mg, was added to her regimen and was increased by 0.25 mg/day. Within 2 days the patient was noted to be less intrusive. On the 5th day of clonazepam treatment, some sedation was apparent; however, Ms. A was noted to be significantly improved. Her family stated that she had not appeared this "normal" in the past 10 years. There was a marked diminution in her overall paranoid posture as well as in the intensity of her somatic delusions. At 10-month follow-up, Ms. A continued to maintain significant gains.

Mr. B, a 29-year-old white man, was hospitalized after an attempt at overdosing with haloperidol. He had suffered from a chronic paranoid schizophrenic illness for about 10 years and had been given a variety of medications, including antipsychotics and lithium, without significant improvement. Mr. B was started on fluphenazine, which was increased to 60 mg/day. There was some improvement in his level of agitation, but his auditory hallucinations and paranoid stance continued. Clonazepam, 0.25 mg/day p.o., was added and was increased by 0.25 mg/day. On day 4 Mr. B was slightly sedated, but he was markedly less paranoid and reported a decrease in the frequency and intensity of his auditory hallucinations, which were noted to have a less aggressive character. He was more socially at ease and acted more appropriately than he had for many years. At 9-month follow-up Mr. B continued to demonstrate a significant response without signs of sedation.

These two cases suggest to clinicians who are not satisfied with their patients' response to "standard" regimens that they might cautiously add clonazepam. One must be wary of the risk of agitation and disinhibition, as noted by Karson et al. (1), but the benefits as demonstrated here may be well worth such a risk. One can also consider the differences in timing and dosage between these two cases and those of Karson et al., in which much higher doses of clonazepam were used.

It is important for research to address the questions raised here. Certainly, clonazepam is not for everyone, but at present there are no satisfactory criteria for predicting in whom the medication will be effective.

REFERENCES

- Karson CN, Weinberger DR, Bigelow L, et al: Clonazepam treatment of chronic schizophrenia: negative results in a doubleblind, placebo-controlled trial. Am J Psychiatry 1982; 139: 1627–1628
- Chouinard G, Young SN, Annable L: Antimanic effect of clonazepam. Biol Psychiatry 1983; 18:451

 –466
- Victor BS, Link NA, Binder RL, et al: Use of clonazepam in mania and schizoaffective disorders. Am J Psychiatry 1984; 141: 1111-1112
- Greenspan D, Levin D: Use of clonazepam in a patient with schizoaffective disorder (letter). Am J Psychiatry 1985; 142:774– 775

JONATHAN M. RAINES, M.D. DAVID GREENSPAN, M.D. Philadelphia, Pa.

Eating Attitudes Test Scores of Patients With Obsessive-Compulsive Disorder

SIR: Clinical lore suggests an association between abnormal eating behaviors and obsessive-compulsive disorder. However, there are very few systematic data on the association between disorders of eating and primary obsessive-compulsive disorder. We therefore carried out a preliminary study of the Eating Attitudes Test in a group of patients with primary obsessive-compulsive disorder. The Eating Attitudes Test is a 26-item questionnaire that screens for the symptoms which are characteristic of anorexia nervosa (1–4).

Sixteen patients (nine men and seven women; mean±SD age=37.1±11.4 years) consented to participate in the study. All the subjects fulfilled the Research Diagnostic Criteria (RDC) for primary obsessive-compulsive disorder. Six subjects also fulfilled criteria for a secondary major depressive disorder at the time of the evaluation. All subjects were within the normal range of body weights according to the Metropolitan Life Insurance Company tables (5). All patients had been medication free for a minimum of 2 weeks at the time the Eating Attitudes Test was administered. None of the patients had obsessions or compulsions relating to body weight or eating behavior, and none had any symptoms suggestive of an eating disorder.

The mean \pm SD test score for the whole group was 5.3 \pm 6.5, with a range of 0–19. There was no significant difference in scores between patients with and patients without major depression (7.2 \pm 8.5 and 4.2 \pm 5.2, respectively). There was a nonsignificant trend for the women to have a higher mean score than the men (7.9 \pm 8.2 and 3.3 \pm 4.5, respectively).

Our preliminary data suggest that eating behaviors or concerns about body weight which are characteristic of anorexia nervosa are not commonly associated with primary obsessive-compulsive disorder. The mean Eating Attitudes Test scores in our cohort of patients with obsessive-compulsive disorder approximate those found in normal control subjects in several previous studies (1–4). Furthermore, all patients had scores well below 30–32, the suggested cutoff scores to identify patients with symptoms characteristic of an eating disorder (1, 2). Although our study does not indicate a relationship between disorders of eating and obsessive-compulsive disorder, our findings do not directly address the relationship between clinical eating disorder, according to standardized diagnostic criteria, and obsessive-compulsive disorder.

Our findings are also limited by the small sample size. In this small sample, one or two subjects, at most, would be expected to have a clinical eating disorder. Further studies using a standardized diagnostic interview and a range of rating scales that measure eating behavior are required to clearly establish the relationship between eating disorders and obsessive-compulsive disorder.

REFERENCES

- Garner DM, Garfinkel PE: The Eating Attitudes Test: an index of the symptoms of anorexia nervosa. Psychol Med 1979; 9:273– 279
- Button EJ, Whitehouse A: Subclinical anorexia nervosa. Psychol Med 1981; 11:509–516
- Garner DM, Garfinkel PE: Sociocultural factors in the development of anorexia nervosa. Psychol Med 1980; 10:647-656
- ment of anorexia nervosa. Psychol Med 1980; 10:647-656
 4. Garner DM, Olmsted MP, Bohr Y, et al: The Eating Attitudes
 Test: psychometric features and clinical correlates. Psychol Med
 1982; 12:871-878
- Metropolitan Life Insurance Company: 1983 Metropolitan height and weight tables. Stat Bull Metrop Life Found 1983; 64: 3–9

RUSSELL T. JOFFE, M.D. RICHARD P. SWINSON, M.D. Toronto, Ont., Canada

Antiandrogen Treatment of Aberrant Sexual Activity

SIR: The literature contains several reports on the use of antiandrogens for sex offenders (1, 2). We would like to report the successful use of medroxyprogesterone acetate for compulsive public masturbation and exhibitionism in an elderly outpatient.

Mr. A was brought to the attention of a geropsychiatrist for treatment of aberrant sexual activity. This patient had been seen in an outpatient clinic for 15 years for chronic undifferentiated schizophrenia and moderate mental retardation. He had been discharged, following 26 years of continuous hospitalization, to the care of his sister after he left the hospital against medical advice, presumably because he was unhappy being confined. Ever since, the sister had noted that he occasionally roamed the countryside in the nude and masturbated in public. Over the preceding 2 years the behaviors had worsened; he was frequently undressed inside and outside of his home and masturbated or exhibited his penis throughout the day. Several neighbors had complained about his behavior, and, in fact, he had been arrested 7 years earlier for indecent exposure. He was never violent and did not engage in these activities with others. He had taken thioridazine, 200-600 mg/day, until 10 years previously, when, because of increased social withdrawal, his medication had been changed to a combination of perphenazine, 24–40 mg/day, and amitriptyline, 8–16 mg/day.

Mr. A, though generally cooperative, was chronically disoriented and poorly attired; he conversed in either loose or irrelevant statements. He denied the incidents that his sister detailed. Since he was not obviously hallucinating and did not appear to be depressed or manic, it was not felt that his symptoms were due to psychosis. They also seemed to be more continuous than the "on-off" phenomenon seen in seizure episodes.

After a thorough discussion with Mr. A and his sister about the current indications for and side effects of medroxyprogesterone acetate, it was decided to begin a clinical trial. Mr. A was started on 200 mg i.m. each week, and the dose was gradually increased over 1 month to 400 mg. His pretreatment testosterone level was 500 ng/100 ml. After treatment it was only 60 ng/100 ml.

For 1 month before the initiation of the antiandrogen treatment, Mr. A's sister documented the episodes of exposure or masturbation that she witnessed when giving him medication or meals. Throughout this pretreatment period his mental status was optimal, although he was engaging in inappropriate sexual activity one-third of the time during which she had contact with him. During the following 2 treatment months, this activity decreased to less than 10% of the time when he was in a psychotic decompensation and to 2% of the time when he was not acutely psychotic. Withdrawal of the drug during the subsequent month resulted in a return to the pretreatment frequency of exhibitionism and masturbation, which improved again when medroxyprogesterone was restarted. Thus, we were able to demonstrate a marked decrease in public masturbatory and exhibitionistic activity in a mentally retarded, schizophrenic geriatric patient while he was taking this drug, which allowed him to be maintained in the community.

REFERENCES

- Gagné P: Treatment of sex offenders with medroxyprogesterone acetate. Am J Psychiatry 1981; 138:644

 –646
- Berlin FS, Meinecke CF: Treatment of sex offenders with antiandrogenic medication: conceptualization, review of treatment modalities, and preliminary findings. Am J Psychiatry 1981; 138:601-607

LOUIS ALBERT ROSS, M.D. WALTER P. BLAND, M.D. Washington, D.C. PAUL RUSKIN, M.D. NORMAN BACHER, M.D. Baltimore, Md.

Altered Platelet α₂-Adrenergic Binding Sites in Posttraumatic Stress Disorder

SIR: Preclinical studies have suggested dysregulation of CNS adrenergic receptors (including α_2 -adrenergic) as the pathophysiological "lesion" in affective disorders (1). Studies using the platelet α_2 -adrenergic receptor as a marker have suggested that peripheral α_2 -adrenergic receptor functioning (supersensitive and/or up-regulated) may be different in patients with major depression than it is in control subjects (2). Posttraumatic stress disorder has depressive symptoms (e.g., dysphoria, anxiety, guilt), but few studies have examined putative markers for affective disorders in posttraumatic

stress disorder. We would like to report on our preliminary studies of platelet α_2 -adrenergic receptor binding parameters in posttraumatic stress disorder, which represent, as far as we know, the first steps in examining adrenergic receptor regulation in this population.

Our subjects were Vietnam veterans (11 male, one female; mean ±SD age = 40 ± 6 years) who met the DSM-III criteria for posttraumatic stress disorder. The veterans and 13 agematched control subjects (mean ±SD age=36±8 years) were medication free for at least 3 weeks before the study and had no active substance abuse or major medical illness. Radioligand binding assays were performed in platelet membranes as described previously (3). For each subject's membranes, extended saturation studies (12 concentrations ranging from 0.12 to 35.0 nM) with ³H-rauwolscine (a selective α₂ antagonist) were performed. Specific binding was defined by 100-μM (-)-norepinephrine. Untransformed data were analyzed on an IBM-PC by means of a radioligand binding software package that includes LIGAND (4). Student's t test was used to make group comparisons, with p<.02 as the level of significance.

Extended saturation studies with rauwolscine revealed two sites of interaction. No population differences in the mean ±SD affinity of rauwolscine for either site were observed (for site 1: control subjects, $K_D=0.34\pm0.17$ nM; posttraumatic stress disorder patients, $K_D = 0.53 \pm 0.21$ nM; for site 2: control subjects, $K_D=22.8\pm9.4$ nM; posttraumatic stress disorder patients, $K_D=24.8\pm10.2$ nM). Approximately 40% fewer total rauwolscine binding sites (site 1 and site 2 expressed as mean±SD sites per platelet) were seen in the posttraumatic stress disorder patients' membranes (for control subjects, 212±80; for posttraumatic stress disorder patients, 144 ± 50 ; t=2.7, df=23, p<.01). This difference was due to fewer (t=2.9, df=23, p<.01) rauwolscine site 2 binding sites in the posttraumatic stress disorder patients' membranes (for control subjects, 192.0±77.0; for patients, 116.3±40.8), while no significant population differences in site 1 were observed (for control subjects, 19.2±11.0; for patients, 28.5 ± 11.8).

These results demonstrate two major findings: 1) fewer total platelet α_2 receptor binding sites in this posttraumatic stress disorder sample due to 2) fewer rauwolscine site 2 binding sites (or $\alpha_2[H]$ sites; see below), resulting in an altered ratio (mean \pm SD site 2 to site 1) of α_2 receptor affinity states (for control subjects, 10.8±0.8; for patients, 4.1±0.2; t=3.1, df=23, p<.005). The platelet α_2 -adrenergic receptor (like α_2 receptors in other tissues) consists of at least three components: the recognition site (R), a nucleotide-binding complex (Ni), and adenylate cyclase. Previous studies (5) have shown that the rauwolscine site 1 is the free-R site, also called the α_2 (L) site, and rauwolscine site 2 is the R·Ni complex or α_2 (H) site. The ratio of α_2 (H) to α_2 (L) in membranes reflects an equilibrium between these interchangeable affinity states and may reflect efficiency of coupling to adenylate cyclase (3, 5). These findings are different from those reported in major depression and demonstrate down-regulation of the platelet α_2 receptor rather than up-regulation. The significance of these findings is unclear, however; further studies of the role of adrenergic receptor regulation in posttraumatic stress disorder are warranted, and they continue in our laboratories.

REFERENCES

1. Siever LJ, Davis KL: Overview: toward a dysregulation hypothesis of depression. Am J Psychiatry 1985; 142:1017-1031

- Kafka MS, Paul SM: Platelet α₂-adrenergic receptors in depression. Arch Gen Psychiatry 1986; 43:91–95
- U'Prichard DC, Perry BD, Wang CH, et al: Molecular aspects of regulation of alpha₂-adrenergic receptors, in Frontiers in Neuropsychiatric Research. Edited by Usdin E, Goldstein M, Friedhoff A, et al. London, Macmillan, 1983
 McPherson GA: KINETIC, EBDA, LIGAND, LOWRY—A Col-
- McPherson GA: KINETIC, EBDA, LIGAND, LOWRY—A Collection of Radioligand Binding Analysis Programs: Manual. Amsterdam, Elsevier-Biosoft, 1985
- Perry BD, U'Prichard DC: Alpha-adrenergic receptors in neural tissues: methods and applications of radioligand binding assays, in Brain Receptor Methodologies. Edited by Marangos P, Campbell IC, Cohen RC. London, Academic Press, 1984

BRUCE D. PERRY, M.D., PH.D. Chicago, Ill. EARL L. GILLER, JR., M.D., PH.D. STEVEN M. SOUTHWICK, M.D. West Haven, Conn.

Postural Hypotension With Syncope Possibly Precipitated by Trazodone

SIR: Trazodone is a triazolopyridine derivative that is a relatively selective but weak inhibitor of serotonin (5-HT) reuptake (1, 2). In addition, trazodone possesses α -adrenergic blocking activity (1), especially of the α_1 type (3). There is no inotropic effect on the heart and therefore no tendency toward pump failure (1). This pharmacological profile makes it safer for use in depressed elderly patients. One of the dangerous side effects of most known antidepressants for these patients is postural hypotension, which can lead to traumatic injury, myocardial infarction, or stroke or can induce arrhythmias (4). We observed three patients who developed postural hypotension with syncope on receiving trazodone.

Ms. A, a 67-year-old depressed woman, was treated with trazodone, starting with 50 mg/day and increasing to 100 mg/day on the 3rd day of treatment. Results of a physical examination and an ECG and her blood pressure were within normal limits. Mild arterial hypertension had been treated with 50 mg/day of hydrochlorothiazide for several years. This medication was continued during Ms. A's hospital admission, together with antidepressant treatment. Her blood pressure remained stable.

On the day that Ms. A's dose of trazodone reached 100 mg/day, she fell while rising and lost consciousness for a few seconds, demonstrating generalized muscle weakness, a regular pulse of 120 beats/minute, and blood pressure of 70/50 mm Hg. After several minutes her symptoms improved, her pulse was 80 beats/minute and regular, and her blood pressure was 110/70 mm Hg. Results of an ECG were within normal limits. Following this episode, the hydrochlorothiazide was discontinued, but trazodone was not withdrawn. After several days, Ms. A returned to her usual activities, and no further sudden drops in her blood pressure were observed.

Ms. B, a 66-year-old depressed patient, was treated with 80 mg/day of isosorbide dinitrate for angina pectoris. Results of a physical examination and routine investigations on admission were normal, and her blood pressure was 140/80 mm Hg, her usual value. Trazodone was commenced at 100 mg/day. Half an hour after receiving the drug, Ms. B felt weak. Later, when she attempted to rise, she fell and lost consciousness. On examination, she

was pale, with generalized muscle weakness, and her blood pressure was 85/50 mm Hg. An ECG showed sinus tachycardia of 130 beats/minute. Ms. B was instructed to rest in bed, and after several minutes her pallor improved, and her pulse and blood pressure returned to normal. Treatment with trazodone was discontinued.

Ms. C, a 68-year-old depressed woman, was treated with 80 mg/day of oxprenolol for paroxysmal supraventricular tachycardia. Results of a physical examination and routine investigations on admission were normal, and her blood pressure was 140/80 mm Hg, her usual value. Trazodone was started at 100 mg/day. An hour after receiving her first dose, Ms. C attempted to rise, fell, and lost consciousness. On examination, she was very pale, with generalized muscle weakness. An ECG showed sinus tachycardia of 140 beats/minute, and her blood pressure was 80/50 mm Hg. After several minutes, Ms. C's blood pressure and pulse returned to normal; treatment with trazodone was discontinued.

In these three cases, trazodone seems to have caused dangerous hypotension immediately after the commencement of therapy at a low dose of 100 mg/day p.o. It is notable that all three patients were receiving antihypertensive treatment on a regular basis, which undoubtedly was a contributory factor in the development of the postural hypotension with syncope.

Despite the fact that many studies report the hypotensive effect of trazodone (2, 3, 5), to our knowledge, postural hypotension with syncope has not been reported. However, on the basis of our observations, we believe that trazodone should be used with caution in elderly patients, particularly when it is given in combination with diuretics, antihypertensives, and vasodilators.

REFERENCES

- Rudorfer MV, Golden RN, Potter WZ: Second generation antidepressants. Psychiatr Clin North Am 1984; 7:519–533
- Gershon S: Comparative side effect profiles of trazodone and imipramine: special reference to the geriatric population. Psychopathology 1984; 17(suppl 2):39-50
- 3. Silvestrini B, Valeri P: Trazodone, a new avenue in the treatment of depression. Psychopathology 1984; 17(suppl 2):3-14
- Glassman AH, Bigger J, Giardina EV, et al: Clinical characteristics of imipramine-induced orthostatic hypotension. Lancet 1979; 1:468

 –472
- Himmelhoch JM, Schechtman K, Auchenbach R: The role of trazodone in the treatment of depressed cardiac patients. Psychopathology 1984; 17(suppl 2):51-63

BARUCH SPIVAK, M.D. Petah Tiqva, Israel MARGARET RADVAN, M.D. Tel Aviv, Israel MOSHE SHINE, M.D. Petah Tiqva, Israel

Hypomania Induced by Sertraline, a New Serotonin Reuptake Inhibitor

SIR: Induction of manic or hypomanic symptoms by tricyclic antidepressants is a well-described clinical phenomenon (1). Newer antidepressants have also been implicated (2, 3). We would like to report two cases of hypomania associated with sertraline, a structurally novel antidepressant

that selectively inhibits synaptosomal serotonin uptake in vitro and potentiates pharmacological effects related to serotonergic activities (4).

Mr. A, a 28-year-old janitor, presented with symptoms of depression. He met DSM-III criteria for major depression, recurrent, without psychotic features. A previous depression in 1979 had remitted gradually with benzodiazepine treatment and psychotherapy. One brother had suffered a major depressive episode. The patient had never experienced hypomanic or manic episodes, and there was no family history of bipolar disorder.

Mr. A was treated with sertraline, 200 mg/day, and marked improvement occurred within 5 weeks. Nine weeks after starting sertraline, he reported having heightened energy, increased libido, and logorrhea. His affect was euphoric and he showed mild psychomotor overactivity. A reduction in the sertraline dose to 50 mg and then to 25 mg/day resulted in a decrease in hypomanic symptoms. After this gradual reduction, sertraline was completely discontinued at week 18, and treatment with clonazepam, 0.5 mg at bedtime, was instituted. Mr. A's hypomania slowly disappeared. At week 22 he was euthymic and clonazepam was stopped. Fourteen weeks after stopping sertraline, Mr. A was still euthymic without medication.

Mr. B, a 50-year-old engineer, was referred to our unit because of depression. A DSM-III diagnosis of major depression, single episode, was made; no psychot c features were present. The patient reported episodes of very mild elation during the preceding 5 years that had never prompted him to seek medical help. A paternal uncle and aunt had histories of depression. His depressive symptoms disappeared after 5 weeks of treatment with sert-aline, 200 mg/day. During the 9th week of treatment, Mr. B became euphoric and irritable, with pressure of speech, and was planning to leave his job. The dose was reduced to 100 mg/day. In the following days, all hypomanic symptoms remitted. After 4 weeks on this dose, Mr. B had a recurrence of hypomania. The dose of sertraline was again reduced, to 50 mg every second day, with only partial improvement in his hypomanic symptoms. After a total of 14 weeks of treatment, sertraline was discontinuel, and clonazepam alone was given orally, at a dose of up to 0.5 mg t.i.d., for 4 weeks; then lithium, up to a dose of 300 mg t.i.d., was added. Mr. B became euthymic 4 weeks later and remained so after 8 weeks of lithium treatment.

This letter reports the occurrence of hypomanic symptoms in two patients with a diagnosis of major depression who were treated with sertraline. Sertraline was efficacious in relieving the depression; however, hypomanic symptoms appeared after 9 weeks of treatment at a dose of 200 mg/day. In both cases, the hypomanic symptoms decreased following dose reduction. Of course, an assertion could be made that these patients' hypomanic symptoms coincidentally appeared at the time of sertraline treatment but were not caused by it. However, the fact that the symptoms were closely associated with drug dosage and were limited to drug exposure time strongly suggests that they were drug induced.

For Mr. B, there was a history of subclinical elated behavior, which may have increased his vulnerability to developing hypomanic symptoms induced by sertraline. In the literature, the switch process is usually described as a shift from depression into a clear manic episode, but our two patients developed only hypomanic symptoms. We propose the hypothesis that prompt reduction of antidepressant dose and early treatment of hypomania with clonazepam (5) prevented the progress of symptoms into acute mania. An alternative explanation is that the switch process may be less severe with sertraline than with other antidepressants.

REFERENCES

- 1. Bunney WE: Psychopharmacology of the switch process in affective illness, in Psychopharmacology: A Generation of Progress. Edited by Lipton MA, DiMascio A, Killam KF. New York, Raven Press, 1978
- Turner SM, Jacob RG, Beidel DC, et al: A second case of mania associated with fluoxetine (letter). Am J Psychiatry 1985; 142: 274-275
- 3. Knobler HY, Itzchazy S, Emanuel D, et al: Trazodone-induced mania. Br J Psychiatry 1986; 149:787–789
- Koe BK, Weissman A, Welch WM, et al: Sertraline, 1S,4S-N-methyl-4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-1-naphthylamine, a new uptake inhibitor with selectivity for serotonin. J Pharmacol Exp Ther 1983; 226:686-700
- Chouinard G, Annable L: Antimanic effect of clonazepam. Biol Psychiatry 1983; 18:451

 –466

MARC LAPORTA, M.D. GUY CHOUINARD, M.D. DAVID GOLDBLOOM, M.D. LINDA BEAUCLAIR, M.D. Montreal, Que., Canada

Amoxapine and Neuroleptic Malignant Syndrome

SIR: "Neuroleptic malignant syndrome" describes a syndrome of hyperthermia, muscular rigidity, stupor, and autonomic dysfunction occurring after the use of neuroleptic drugs in predisposed patients (1). Dopamine receptor blockade appears to be a sufficient condition for the emergence of neuroleptic malignant syndrome (2); thus, one might expect to see cases of this syndrome caused by amoxapine, since amoxapine and its metabolites have postsynaptic dopamine-receptor-blocking activity (3). I report here a case of neuroleptic malignant syndrome in which amoxapine appears to have played an etiologic role.

Ms. A, a 69-year-old woman with a history of early primary degenerative dementia, was admitted to a community hospital because of decreased energy, crying spells, irritability, and decreased attention span. Her only psychotropic medicine during the previous 4 months had been trifluoperazine HCl, 2 mg t.i.d., which was discontinued on admission. On the evening of admission, Ms. A received trazodone HCl, 200 mg, and clonazepam, 0.5 mg; she was then under observation without further treatment until the 5th hospital day, when lithium carbonate, 300 mg b.i.d., and amoxapine, 25 mg t.i.d., were begun. By day 7 the amoxapine had been increased to 50 mg t.i.d., and clonazepam, 0.5 mg t.i.d., was added to treat anxiety. On day 10 Ms. A complained of dyspnea and dysphagia and was noted to be dysarthric and confused. Her skin was cold and dry. Spastic movements and tremor of her extremities were noted. Her temperature was 104.8°F, her heart rate was 120 beats/minute and irregular, her WBC was 29,900/mm³ with normal differential, and her blood pressure was 170/100 mm Hg. All medicines were stopped, and the patient was transferred to a university hospital medical unit the following day.

CAT scan of the head, cultures of urine, sputum, and

blood, arterial blood gases, lumbar puncture, chest X-ray, thyroid studies, hepatitis B surface antigen, and a serum test for syphilis did not show abnormalities. Blood urea nitrogen and creatinine levels were elevated 2.5 times normal, the WBC was 27,600/mm³ with normal differential, and the creatinine phosphokinase level was markedly elevated at 3235 IU/liter, consistent with skeletal muscle origin.

Only routine supportive care and intravenous fluids were used in treatment. Ms. A's vital signs and abnormal laboratory values returned to normal within 15 days of the onset of the syndrome. She returned to her premorbid depressed state and was transferred to a general psychiatry unit.

The patient's physical and laboratory findings all point toward the diagnosis of neuroleptic malignant syndrome (1). In this case amoxapine was used in conjunction with lithium carbonate. Lithium has been described clinically as enhancing the parkinsonian effects of neuroleptics and may have some antagonistic action on dopaminergic transmission (4). A better understanding of the possible combined antidopaminergic effects of amoxapine and lithium carbonate would clarify the etiology in this case of neuroleptic malignant syndrome. Also, the preexistence of brain disease may have been a predisposing factor (5).

REFERENCES

- Caroff SN: The neuroleptic malignant syndrome. J Clin Psychiatry 1980; 41:79–83
- Henderson VW, Wooton GF: Neuroleptic malignant syndrome: a pathogenic role for dopamine receptor blockade? Neurology (NY) 1981; 31:132-136
- Cohen BM, Harris PQ, Altesman RI, et al: Amoxapine: neuroleptic as well as antidepressant? Am J Psychiatry 1982; 139: 1165-1167
- Spring G, Frankel M: New data on lithium and haloperidol incompatibility. Am J Psychiatry 1981; 138:818–821
- Guze BH, Baxter RB: Current concepts: neuroleptic malignant syndrome. N Engl J Med 1985; 313:163–166

TIMOTHY LESACA, M.D. Morgantown, W.Va.

Homophobia Among Physicians and Nurses Treating AIDS Patients

SIR: In his review article "Psychiatric Aspects of AIDS" (1), Michael E. Faulstich, M.D., mentioned an important area of concern but failed to include relevant published data on the subject. He wrote, "In addition to societal reactions toward AIDS, the attitudes and responses of medical staff are also important considerations. . . . Medical personnel must admit and confront their own concerns about AIDS, perhaps involving . . . negative attitudes toward caring for homosexuals" (p. 554). We certainly agree with this statement and were quite surprised that our carefully designed study on these very issues was not mentioned by him despite its publication in 1985 in Hospital and Community Psychiatry (2) and the presentation of our data in different formats at both the 1984 and 1985 APA annual meetings, as well as at the International Conference on AIDS in Paris, June 23-25, 1986 (T.P. Kalman, et al., "Homophobia Among Physicians and Nurses in Response to AIDS," abstract 225)

In that work we documented the existence of significant

homophobia among physicians and nurses dealing with AIDS patients in 1983 in a large urban teaching hospital. We found that variables such as age, religion, marital status, and years of professional experience did not influence measured homophobia; however, health professionals who had a close homosexual friend or relative were significantly less homophobic than those who did not. Alarmingly, 10% of our respondents agreed with the test statement "Homosexuals who contract AIDS are getting what they deserve."

While it is not our intention to re-present our entire study in this letter, we do hope to make the readers of the *Journal*, its reviewers, and Dr. Faulstich aware of its existence. We repeated the study in 1986, the results of which have recently been published (3).

REFERENCES

- Faulstich ME: Psychiatric aspects of AIDS. Am J Psychiatry 1987; 144:551–556
- Douglas CJ, Kalman CM, Kalman TP: Homophobia among physicians and nurses: an empirical study. Hosp Community Psychiatry 1985; 36:1309–1311
- Kalman TP, Kalman CM, Connelly M, et al: Homophobia reassessed (letter). Hosp Community Psychiatry 1987; 38:996

THOMAS P. KALMAN, M.D. CONCETTA M. KALMAN, R.N. CAROLYN J. DOUGLAS, M.D. New York, N.Y.

Comment on the APA Position Statement on Psychoactive Substance Use

SIR: The recently revised APA position statement dealing with marijuana and cocaine (1) is timely, clinically sound, and particularly important to the pediatric and child psychiatry communities. We in these related disciplines have long been aware of the special hazards of marijuana for children and adolescents. The tasks of individuals in these developmental stages demand unclouded psyches in order to negotiate effectively the challenges of cognitive, emotional, and social development.

An additional finding which was not cited in the statement is that not only are users of marijuana at risk for untoward effects, as is true with alcohol, but so also is the human fetus of a cannabis-using mother. Several studies (2–5) point to both a toxic effect on the fetus and a neurodevelopmental effect.

REFERENCES

- American Psychiatric Association: Position statement on psychoactive substance use and dependence: update on marijuana and cocaine. Am J Psychiatry 1987; 144:698-702
- Fried PA: Marihuana use by pregnant women: neurobehavioral effects in neonates. Drug Alcohol Depend 1980; 6:415-424
 Hingson R, Alpert JJ, Day N, et al: Effects of maternal drinking
- Hingson R, Alpert JJ, Day N, et al: Effects of maternal drinking and marihuana use on fetal growth and development. Pediatrics 1982; 70:539–546
- Qazi QH, Mariano E, Milman DH, et al: Abnormalities in offspring associated with prenatal marihuana exposure. Dev Pharmacol Ther 1985; 8:141–148
- Lester BM, Dreher MC: Effects of marijuana smoking during pregnancy on newborn cry analysis. Pediatr Res 1987; 21:182A

DORIS H. MILMAN, M.D. QUTUB H. QAZI, M.D. Brooklyn, N.Y.

Comments on Review of Brief Psychotherapies

SIR: I am impressed by the thoughtful review of brief psychotherapies by Robert J. Ursano, M.D., and Robert E. Hales, M.D., published in the December 1986 issue of the *Journal* (1). Of necessity, the article was quite dense, and I would like both to encourage therapists to read some of the original authors noted and to proffer an additional work.

In their article the authors said, "Previous [to Michae! Balint and David Malan] attempts to develop brief forms of psychoanalytic psychotherapy primarily involved the use of activity." Although this may be a general understanding, I am not sure it accurately represents what was being written. Alexander and French, in their book Psychoanalytic Therapy (2), first published in 1946, addressed the issue of psychotherapy reaching its goal as "expeditiously and efficiently" (p. 291) as possible. They elegantly described the need to plan therapy and how to approach this topic, when and how one might want to avoid a full-blown transference neurosis, and how to tailor goals and techniques to a patient's particular ego strengths and weaknesses (as well as to the knowledge and experience of the therapist). Some information is outdated. Their activity in trying to create a "corrective emotional experience" was a bit too manipulative and potentially destructive. Maybe that is why their work was not mentioned in Drs. Ursano and Hales's article, but the theory of a corrective emotional experience is appropriately receiving increased attention. A reminder may help us to keep from simply repeating past excesses that stemmed from this accurate empathic stance.

Alexander and French added a wonderful bit of history, useful clinical conceptualizations, and many case histories—all in a scholarly yet enjoyable style. They tended to avoid classifying psychotherapy by its duration and focused more on how to achieve the intended effect, a concept worth emphasizing.

REFERENCES

- Ursano RJ, Hales RE: A review of brief individual p:ychotherapies. Am J Psychiatry 1986; 143:1507-1517
- 2. Alexander F, French T: Psychoanalytic Therapy: Principles and Application. Lincoln, University of Nebraska Press, 1974

JAMES ALPERT, M.D. A bany, N.Y.

SIR: I was very favorably impressed by the review article on brief individual psychotherapies by Drs. Ursano and Hales, but I was surprised that the 1946 book I sychoanalytic Therapy by Alexander and French (1) was not among the 80 references. Although this work is of historical significance, it is more than a relic. It was so far ahead of its time 40 years ago that it remains timely even today. Much the same might be said about Men Under Stress by Grinker and Spiegel (2), which was not among the "combat psychiatry" references and, I believe, certainly should have been.

REFERENCES

- Alexander F, French TM: Psychoanalytic Therapy: Principles and Application. New York, Ronald Press, 1946
- Grinker RR, Spiegel JP: Men Under Stress. I hiladelphia, Blakiston, 1945

MARC H. HOLLEN DER, M.D. Nasiville, Tenn.

SIR: The article on brief psychotherapies by Drs. Ursano and Hales purported to be an overview of brief psychotherapy, but it has left out a large segment of the literature, namely, anything written before 1965-1970. By so doing, the article gives the impression that brief psychotherapy is a recent development and that it is based largely on the contributions of Malan, Sifneos, Davanloo, Mann, and a few other present-day writers. The historical dimension is missing.

While Drs. Ursano and Hales understandably wanted to give prominence to what is new in the field, one wishes they had made it clear that brief psychotherapy has a long and lively history which dates back at least a century to Freud's cathartic method and to Studies on Hysteria (1) and that much currently presented as new has been in and out of the literature for decades. For example, Alexander and French (2) emphasized accurate early dynamic formulation, and Felix Deutsch (3) taught "sector psychotherapy" long before Malan became impressed with the utility of identifying focal conflict. Alexander, Deutsch, and other major past contributors are not cited by Drs. Ursano and Hales.

All this is important because those who are familiar primarily with what is being written today may not be aware that brief psychotherapy has a worthy past as well as a present and that recent contributions may represent the shifting tides of a complex debate (4). For example, serious questions can be raised about the current (over)emphasis on transference interpretations and aggressive confrontations in brief psychotherapy.

This tendency not to acknowledge or integrate past contributions may be an issue not just in the area of brief psychotherapy but for psychiatry in general. The body of knowledge of psychiatry, unlike the Physicians' Desk Reference, does not go out of date once a year.

REFERENCES

- 1. Breuer J, Freud S: Studies on Hysteria (1893-1895): Complete Psychological Works, standard ed, vol 2. London, Hogarth Press,
- Alexander F, French TM: Psychoanalytic Therapy: Principles and Application. New York, Ronald Press, 1946
- Deutsch F, Murphy WF: The Clinical Interview, vol II: Therapy. New York, International Universities Press, 1955
- Castelnuovo-Tedesco P: Brief psychotherapy, in American Handbook of Psychiatry, vol V. Arieti S, editor-in-chief. New York, Basic Books, 1975

PIETRO CASTELNUOVO-TEDESCO, M.D. Nashville, Tenn.

SIR: I was amazed on reading the interesting review of brief individual psychotherapies by Drs. Ursano and Hales that there was only one reference to the work of Leopold Bellak. In my opinion, Dr. Bellak's work, coupled with that of Drs. Karl Menninger, Roy Grinker, and Hayden Donahue, has formed the basis of crisis-oriented therapy techniques that are currently the predominant practice of many psychiatrists and other psychiatric clinicians in health maintenance organizations, community mental health centers, and community-based practices. Dr. Bellak championed the approach of using a crisis as the focus of therapeutic growth. Coming from a psychoanalytic tradition, he brought to bear knowledge of psychodynamics in creating the technical therapeutic interventions that facilitate growth at a time of psychic turmoil. Dr. Bellak's chapter "Emergency Psychotherapy of Depression" (1) was published in a book by

Bychowski and Despert that antedated the publications mentioned in the Journal article. The Trouble Shooting Clinic initiated by Dr. Bellak at Elmhurst General Hospital was nationally noted as the first clinic fully staffed and open 24 hours a day. Emergency Psychotherapy and Brief Psychotherapy (2), published in 1965, included research results from work supported by a number of NIMH grants and has been translated into Spanish, Portuguese, and Italian. A revision of it appeared in 1978. I have looked to this and to his Handbook of Intensive Brief and Emergency Psychotherapy (3), published in 1983, for guidelines in the use of brief psychotherapeutic techniques.

Dr. Bellak is an important living, theoretical link to the dynamic therapies that Freud and his followers championed earlier in this century. He studied with Freud in Austria before coming to the United States in the 1930s and has been a mentor to many individuals who wished to put into practice the theoretical concepts that form the foundation of classical psychoanalysis and the practice of briefer therapies. His work has demonstrated that we who employ less intensive therapeutic approaches have as a theoretical basis fundamentals of psychoanalysis that endure even if the technical aspects of their application have changed. I am grateful for Dr. Bellak's efforts to make this available to crisis interventionists as well as for his continuing contributions to the evolving theoretical foundation of modern psychiatric practice.

REFERENCES

- 1. Bellak L, Cohen L: Emergency psychotherapy of depression, in Specialized Techniques in Psychotherapy. Edited by Bychowski G, Despert JL. New York, Basic Books, 1952

 2. Bellak L, Small L: Emergency Psychotherapy and Brief Psycho-
- therapy. New York, Grune & Stratton, 1965
- 3. Bellak L, Siegel H: Handbook of Intensive Brief and Emergency Psychotherapy. Larchmont, NY, CPS, 1983

ANDREW E. SLABY, M.D., PH.D., M.P.H. Summit, N.I.

SIR: According to Drs. Ursano and Hales in their review of brief psychotherapies, David Malan excludes from brief focal psychotherapy patients who have had serious suicide attempts, drug addiction, long-term hospitalization, more than one course of ECT, chronic alcoholism, severe chronic obsessional symptoms, gross destructive or self-destructive behavior, or "convinced" homosexuality. By convinced homosexuality Dr. Malan means persons who do not want to change their homosexual orientation to heterosexual. Since Drs. Ursano and Hales made no comment about sexual orientation as a selection criterion for brief psychotherapy, we would like to do so.

Dr. Malan apparently accepts the old psychoanalytic belief that homosexuality is pathological—in fact, so pathological that the homosexual person cannot benefit from brief focused psychotherapy unless he or she is willing to try to become heterosexual. Better-informed psychoanalysts, such as Judd Marmor, M.D., no longer consider homosexuality to be pathological (1). On the basis of thorough scientific investigation, the American Psychiatric Association removed homosexuality from its list of mental disorders in 1974. The final report of the American Psychological Association Task Force on Sexual Orientation concurs that homosexuality is not a pathological condition (2). Other brief psychotherapy specialists, including Davanloo, Mann, Sifneos, Klerman, Beck, and Rush, do not exclude people because of their sexual orientation.

Although there is no evidence that sexual orientation per se should be a selection criterion for brief psychotherapy, there is general agreement that the quality of a patient's relationships should be assessed. For example, uncertainty about sexual orientation with intense, unstable relationships as part of borderline personality disorder would probably make focusing briefly on just one issue impossible. The reason for excluding such a patient from brief therapy would be borderline psychopathology, not homosexuality. Actually, a convinced homosexual person who has resolved the issue of sexual identity and is involved in a stable relationship could be a better candidate for brief focused psychotherapy than an unconvinced heterosexual, bisexual, or homosexual person.

Excluding good candidates from brief psychotherapy solely because of homosexuality constitutes prejudicial negligence and malpractice. At the least, a homophobic therapist should assist these patients by referring them to therapists who are capable of providing affirmative brief psychotherapy for homosexual people.

REFERENCES

- Marmor J (ed): Homosexual Behavior: A Modern Reappraisal. New York, Basic Books, 1980
- Paul W, Weinrich JD (eds): Homosexuality: Social, Psychological, and Biological Issues. Beverly Hills, Calif, Sage Publications, 1982

STANLEY E. HARRIS, M.D. MARK A. STEVENS, PH.D. Los Angeles, Calif.

SIR: In their article on brief psychotherapies, Drs. Ursano and Hales concluded that "the importance of brief individual psychotherapy to the practicing clinician makes mandatory the inclusion of instruction in brief psychotherapy in psychiatric residency training"—a conclusion we very much agree with. However, we believe that the authors strongly implied by the broad scope of their title, their briefer discussion of cognitive and interpersonal brief therapies, and the omission of several other significant approaches to brief treatment that the psychodynamically oriented brief therapies of Malan, Sifneos, Mann, and Davanloo are representative of the field of brief psychotherapy in general, thus their conclusion that "brief psychotherapy is best taught in conjunction with a discussion of the principles of long-term psychotherapy." We believe that this bias significantly limits the understanding and the range of application of brief psychotherapy.

It would have been useful, if not important, for the authors to have made clearer that the psychodynamic brief therapies, based as they are on principles appropriate for long-term therapy, would, logically, propose limitations on selection of clients for brief therapy, not because of any inherent limitations in the prospective patients but because of pessimistic or constricting premises in the psychodynamic model.

It would also have helped to have clarified that the dependency on insight or another form of understanding as the major modality in psychodynamic brief therapies restricts such therapy to patients seen as amenable to insight-oriented work. Such clarifications would allow readers to consider that other modalities can be used in brief therapy, e.g., the work of the behaviorists (Wolpe [1] and others), the work of Milton Erickson (2), the various forms of brief hypnotherapy (Speigel [3]), and the work of our own Brief Therapy Center (4)—all approaches using action-oriented or task-oriented interventions.

Since the title of the article by Drs. Ursano and Ha es refers to *individual* therapies, we have so far not mentioned a great body of work originating in brief family-oriented therapies, such as that of Madanes (5) and some of the work at the Philadelphia Child Guidance Clinic and the Ackern an Family Institute. This work also has important existing or potential application to working with individuals; clinicians and instructors interested in brief therapies should be acquainted with it.

We believe it important to call attention to these c missions because, while the authors recognized the growing i iterest in and use of brief psychotherapy, viewing it as simply or mainly a focalized implementation of psychodynamic/psychoanalytic treatment has hampered and will continue to hamper its recognition and development as a major mode of treatment in its own right.

REFERENCES

- Wolpe J: The Practice of Behavior Therapy. New York, Pergamon, 1969
- Haley J: Uncommon Therapy: The Psychiatric Techniques of Milton H Erickson, MD. New York, WW Norton, 1973
- Speigel H, Speigel D: Trance and Treatment: Clinical Uses of Hypnosis. New York, Basic Books, 1978
- 4. Fisch R, Weakland JH, Segal L: The Tactics of Change: Doing Therapy Briefly. San Francisco, Jossey-Bass, 1982
- Therapy Briefly. San Francisco, Jossey-Bass, 1982
 5. Madanes C: Strategic Family Therapy. San Francisco, Jossey-Bass, 1981

JULES RISKIN, M.D. RICHARD FISCH, M.D. Palo Alto, Calif.

Drs. Ursano and Hales Reply

SIR: We much appreciate the thoughtful comments in response to our article—both from those who have written to the Journal and from those who have written directly to us. Because of space limitations, we could not include a substantial historical overview of the topic of brief individual psychotherapy. We agree with Drs. Hollender, Castelnuovo-Tedesco, and Alpert that substantial work on brief psychodynamic psychotherapy was done much earlier in the development of psychotherapy and psychoanalysis. As with most psychotherapies, the brief psychodynamic psychotherapies began with Freud, whose earliest psychoanalytic treatments lasted from a few sessions to several months. For instance, he reported a successful cure of the hysterical arm paralysis of the conductor Bruno Walter and a single 4-hour session to resolve Gustav Mahler's sexual impotence. We would certainly have referred to Alexander and French's classic work (1) if space had allowed. Alexander and French led the field in applying psychoanalytic principles to short-tern dynamic psychotherapy. Other early contributors included Ferenczi (2), with his technique of "active" therapy, and Rank (3), who set a termination date in advance in order to focus therapy on conflicts associated with separation from the therapist. Marmor (4) published an excellent historical review summarizing the contribution of Freud and others to the development of short-term dynamic psychot aerapy; we encourage readers to consult this article for a more comprehensive historical perspective.

We agree with Dr. Castelnuovo-Tedesco in bringing readers' attention both to his own fine work (5, 6) and to the infrequently cited work by Deutsch and Murphy (7).

Deutsch and Murphy conceptualized a focal form of treatment and interviewing that set a paradigm for much of actual clinical psychotherapy, which is conducted in a more focused manner than is usually presented in the literature. In the psychodynamic treatments, the critical issue is that the focus is developed from the patient's presentation and immediate affect state rather than imposed from the outside.

With regard to the application of brief psychotherapies to the psychiatric casualties of combat, we again emphasized contemporary works that examine technique and may be more readily available to the reader. For a recent review of military psychiatry that includes a discussion of many classic works published after World War II, the reader is referred to Ursano and Holloway (8).

Drs. Riskin, Fisch, and Slaby raise another important issue. Our article focused on psychotherapy that is distinct from other forms of brief therapy and from crisis intervention per se. This is a conceptual distinction that others may not find beneficial. However, our view has been that psychotherapy, which is primarily directed toward change in an individual through the use of verbal rather than other types of interventions, should be distinguished from other forms of treatment. Clearly, the brief individual psychotherapies benefit from and bring benefit to other forms of brief therapy, including behavioral therapy, hypnotherapy, crisis intervention, and supportive psychotherapy (probably the most widely used psychotherapy [9, 10]). Further research and clarification of the selection criteria, technique, and outcome of supportive psychotherapy in particular are much needed. We in no way wish to imply that brief individual psychotherapy is the only form of brief treatment. In fact, all of our teaching and writing are in the opposite direction. Brief individual psychotherapy is one particular form of treatment that appears to be beneficial to a particular group of patients. The appropriate evaluation of a patient should include consideration of a wide range of treatment modalities. The clinician's skill and art is in selecting the appropriate treatment for the appropriate illness and the appropriate patient. Penicillin is a wonderful drug, but it does not treat diabetes, nor is it the only drug in the medical armamentarium. Dr. Slaby's reference to Dr. Bellak's books (11-13) is a particularly excellent suggestion for readers who wish to look further at the interface between psychotherapy and crisis intervention treatments.

We could find no more information in Malan's publications to clarify the concern Drs. Harris and Stevens raise about Malan's use of homosexuality as an exclusion criterion for focal psychotherapy. The philosophy of focal psychotherapy includes the importance of identifying a focus that can be dissected out from underlying psychopathology. If Dr. Malan is following a traditional psychoanalytic viewpoint, he may be attempting to distinguish potential narcissistic personality disorders, in which focal therapy of any kind can be problematic. However, the relationship between homosexuality and narcissistic personality disorder is not one to one. In our view, the critical issue for any brief individual psychotherapy is the ability to dissect out a focal issue.

REFERENCES

- 1. Alexander F, French TM: Psychoanalytic Therapy: Principles and Application. New York, Ronald Press, 1946
 2. Ferenczi S: The further development of an active therapy in
- psychoanalysis (1921), in Further Contributions to the Theory and Technique of Psychoanalysis. Edited by Ferenczi S. London, Hogarth Press, 1950

- 3. Rank O: Will Therapy. New York, Alfred A Knopf, 1947
- Marmor J: Short-term dynamic psychotherapy. Am J Psychiatry 1979; 136:149-155
- 5. Castelnuovo-Tedesco P: Brief psychotherapy, in American Handbook of Psychiatry, vol V. Arieti S, editor-in-chief. New York, Basic Books, 1975
- 6. Castelnuovo-Tedesco P: The Twenty-Minute Hour. Washington, DC, American Psychiatric Press, 1986
- Deutsch F, Murphy WF: The Clinical Interview, vol II: Therapy. New York, International Universities Press, 1955
- 8. Ursano RJ, Holloway HC: Military psychiatry, in Comprehensive Textbook of Psychiatry, 4th ed. Edited by Kaplan HI, Sadock BJ. Baltimore, Williams & Wilkins, 1985
- Werman DS: The Practice of Supportive Psychotherapy. New
- York, Brunner/Mazel, 1984

 10. Winston A, Pinsker H, McCullough L: A review of supportive psychotherapy. Hosp Community Psychiatry 1986; 37:1105-
- 11. Bellak L, Cohen L: Emergency psychotherapy of depression, in Specialized Techniques in Psychotherapy. Edited by Bychowski G, Despert JL. New York, Basic Books, 1952
- 12. Bellak L, Small L: Emergency Psychotherapy and Brief Psychotherapy. New York, Grune & Stratton, 1965
- 13. Bellak L, Siegel H: Handbook of Intensive Brief and Emergency Psychotherapy. Larchmont, NY, CPS, 1983

ROBERT J. URSANO, M.D. ROBERT E. HALES, M.D. Bethesda, Md.

Time Course of Effects of Clonidine

SIR: In "Clonidine in Neuroleptic-Induced Akathisia" (1), Lenard A. Adler, M.D., and associates reported significant improvement in the akathisia of patients treated with clonidine at doses of 0.2–0.4 mg/day. They stated, "An effect was seen early in the course of treatment," but they did not specify how early. In a similar study, Zubenko et al. (2) observed maximal therapeutic benefits within 24-48 hours of patients' reaching their target doses of 0.4 mg/day. In that same study, akathisia scores returned to pretreatment levels within 24-48 hours of discontinuing clonidine.

We were interested in the time course because we have used clonidine to treat patients with tardive dyskinesia and have found that although the dose that produced maximal therapeutic benefits was similar to that reported by Zubenko et al. (about 0.4 mg/day), the time course for maximal effect was longer: 3 days or more elapsed before we saw improvement. Nishikawa et al. (3) reported a similar experience: they saw striking improvement in tardive dyskinesia 3 days after administration of clonidine.

The rapidity of action that is found in the treatment of akathisia with clonidine seems similar to the rapid effects reported in the treatment of acute mania with clonidine, while the more delayed course of action seen in tardive dyskinesia parallels the pattern seen in hypertension treated with clonidine. It has been postulated that the delayed therapeutic effects of clonidine in tardive dyskinesia may result from desensitization of postsynaptic noradrenergic receptors, while the rapid effects are due to reduction in noradrenaline turnover through presynaptic α-receptor stimulation (3, 4).

Dr. Adler and his co-workers also commented on the sedative effects observed in their patients treated with clonidine. This surprised us. Postural hypotension has been the problematic side effect in tardive dyskinesia patients treated in our series. We have not seen sedation. Is it possible that sedation resulted from the combination of clonidine and

neuroleptics? Could the "sedation" observed by Dr. Adler and associates have been the phenomenon that is called "antimanic" by other investigators? If a few of the six patients in this small series were manic as well as having akathisia (5), clonidine might have had multiple effects.

REFERENCES

- Adler LA, Angrist B, Peselow E, et al: Clonidine in neurolepticinduced akathisia. Am J Psychiatry 1987; 144:235–236
- Zubenko GS, Cohen BM, Lipinski JF Jr: Use of clonidine in treating neuroleptic-induced akathisia. Psychiatry Res 1984; 13: 253-259
- Nishikawa T, Tanaka M, Tsuda A, et al: Clonidine therapy for tardive dyskinesia and related syndromes. Clin Neuropharmacol 1984; 7:239–245
- Nishikawa T, Tanaka M, Koga I, et al: Tardive dyskinesia treated with clonidine. Kurume Med J 1980; 27:209-210
- Lipinski JF Jr, Zubenko GS, Cohen BM, et al: Propranolol in the treatment of neuroleptic-induced akathisia. Am J Psychiatry 1984; 141:412–415

V. KHOT, M.D. J. GOODWIN, M.D. G. WANDRY, M.D. Milwaukee, Wis.

Dr. Adler and Associates Reply

SIR: We thank Dr. Khot and colleagues for their thoughtful comments about the time course of the effects of clonidine as a clue to underlying pharmacologic mechanisms. Sedation might have been enhanced by the combination of clonidine and neuroleptics. However, sedation has also been seen in patients undergoing opiate detoxification who are not taking neuroleptics (1, 2).

REFERENCES

- Washton AM, Resnick 'RB, Perzel JF Jr, et al: Lofexidine, a clonidine analogue effective in opiate withdrawal (letter). Lancet 1981; 1:991-992
- Gold MS, Pottash AC, Annitto WJ, et al: Lofexidine, a clonidine analogue effective in opiate withdrawal (letter). Lancet 1981; 1: 992-993

LENARD A. ADLER, M.D.
BURT ANGRIST, M.D.
ERIC PESELOW, M.D.
JOHN REITANO, M.D.
JOHN ROTROSEN, M.D.
New York, N.Y.

Russian Roulette and Suicide

SIR: In their interesting paper on Russian roulette deaths (1), David A. Fishbain, M.D., and his colleagues viewed all playing of Russian roulette as an "extreme form of risktaking behavior" (2) on the part of suicidal subjects. This is no doubt so in many—but certainly not in all—cases in which the playing of Russian roulette has resulted in death. There are known instances in which the player was neither suicidal nor depressed, and the fatal outcome was most likely an accident.

It is obviously important for both psychological and medicolegal reasons to distinguish between suicide and accidental death. Shneidman et al. (3) reported some cases in which Russian roulette deaths were clearly suicides. Others were just as clearly accidental and were ruled accidental deaths. As these authors put it, there were Russian roulette deaths "that did not conform to the classical model. These men did not consider themselves to be gambling with death. Each of them thought that he knew where the bullet was located (and was in fatal error)" (3). For example, one victim had a collection of revolvers and would give demonstrations of Russian roulette to women; another victim, a gang bully, would use Russian roulette to scare and intimidate newly initiated members; still another victim used Russian roulette to try to persuade a woman that his gun was safe. "In all these deaths the recommendation [for cause of death] was accident" (3).

The same question may arise in the variant of Russian roulette in which people alternate in pointing the revolver not at themselves but at each other. I was recently asked to see a severely depressed 18-year-old man with all the cardinal symptoms of a posttraumatic stress disorder who had been arrested for killing his best friend by shooting him in the head in just such a game. He was absolutely sure he had seen the bullet in a safe position before he pulled the trigger. At the time, neither the player nor the victim was homicidal or suicidal, and both thought they knew how to play Russian roulette without risk.

In a case of self-inflicted Russian roulette death, the presence of other people should always raise suspicion that the victim may not have been suicidal but, rather, manipulative and was convinced he or she knew how to play Russian roulette safely.

REFERENCES

- Fishbain DA, Fletcher Jr, Aldrich TE, et al: Relationship between Russian roulette deaths and risk-taking behavior: a controlled study. Am J Psychiatry 1987; 144:563-567
- 2. Baechler J: Suicides. New York, Basic Books, 1979
- Shneidman ES, Farberow NL, Litman RE: The Psychology of Suicide. New York, Science House, 1970

HANUS J. GROSZ, M.D. Indianapolis, Ind.

Dr. Fishbain and Colleagues Reply

SIR: Dr. Grosz makes two major points: Russian roulette victims may not be suicidal (the fatal outcome being an accident), and Russian roulette deaths in the presence of others should raise the suspicion of manipulation of others.

We agree with both points. However, in reference to our study sample, the following should be noted. 1) All the Russian roulette deaths were classified by the medical examiner as suicides. 2) All the Russian roulette deaths occurred in the presence of others. 3) We were never certain whether these Russian roulette deaths were suicides or accidents and therefore never referred to them in the paper as either suicides or accidents. 4) We tested Baechler's theory (1) that Russian roulette deaths are "ventured suicides" and, to our surprise, found that these subjects had a high frequency of depression, even when compared to subjects who intended suicide, leading one to suspect a potential for suicide.

Discussion about whether Russian roulette deaths are suicides or accidents does not address the main point of the paper: patients who display risk-taking behavior may be depressed, and the risk-taking behavior may serve an anti-depressant function. It is to be noted that in all of the Russian

roulette accident cases which Dr. Grosz cites there was some element of risk, i.e., the resultant deaths. Because of this element of risk, the vast majority of the population would under no circumstances participate in such behavior. This kind of risk-taking behavior is abnormal and requires further psychiatric study. It should not be written off as resulting in accidents, although from a medicolegal standpoint it is important to make the distinction between suicide and accident.

Another important concept with respect to Russian roulette deaths, as we pointed out in our paper, is the concept of the "ordeal." We believe that this may be the second motive for playing Russian roulette and the reason for the importance of the "other" in Russian roulette deaths. Dr. Grosz's point about manipulation can be related to this ordeal concept, and in our opinion it is better conceptualized in this way than by "manipulation."

REFERENCE

1. Baechler J: Suicides. New York, Basic Books, 1979

DAVID A. FISHBAIN, M.D. JAMES R. FLETCHER, M.D. TIMOTHY E. ALDRICH, M.P.H., PH.D. JOSEPH H. DAVIS, M.D. *Miami Beach, Fla.*

Transitional Day Hospitalization

SIR: The psychiatric day hospital has been shown to be a reasonable and efficient treatment setting for many different kinds of patients. However, unlike the situation in England, where organizational incentives have favored overutilization (1), in the United States day hospitalization remains underutilized and underfunded (2, and a paper by M.E. Hanrahan et al. presented at a meeting of the American Partial Hospitalization Association, Sept. 13, 1985). In this context, the report "A Controlled Study of Transitional Day Care for Non-Chronically-Ill Patients" by Ira D. Glick, M.D., et al. (3) lends itself easily to misinterpretation and deserves comment.

The authors reported that over a 1-year follow-up period of assessment, there was virtually no difference in outcome between a group of recently discharged patients who received transitional treatment in a day hospital-like setting and a randomly controlled group that received weekly outpatient group therapy along with medication maintenance. I believe that these results are vitiated by the nature of the study sample and the nature of the program.

The study assessed nonchronic patients, most of whom had a diagnosis of major affective disorder and were white and middle-class. The psychotic subgroup of patients in the study were "nonchronic" and had a "schizophrenic/schizophreniform" disorder; they apparently had to be judged by therapists and administrators not to be at risk in case they were randomly assigned to "only" outpatient care (p. 1556). For many or most such better-prognosis patients, recovery to the level of previous function is to be expected; consequently, one would expect the difference between adequate follow-up treatment in an outpatient clinic and adequate follow-up treatment of any other type to wash out in the analysis. The failure to find an advantage in day treatment for this sample is therefore no surprise.

I would suggest that a more profitable study of the value of transitional day care would be to take patients with severe social and vocational handicaps (presumably, severely ill schizophrenic patients) and compare inpatient hospitalization alone with brief inpatient treatment followed by early discharge to a day hospital. Shorter inpatient stays have obvious economic benefit. Unfortunately, Dr. Glick and associates provided no data on the criteria for admission to the inpatient service, the duration of hospitalization, or the possible use of their day program to reduce the number of inpatient days. However, it has long been known that even acutely psychotic patients can be treated in an appropriately designed day hospital—and at less cost (4). Day hospitalization has the additional advantages of not removing patients from their peer and home environments and of not placing them in the restrictive setting of an inpatient ward.

One might argue that it is unfair to criticize Dr. Glick and colleagues for not having done a different study from the one they set out to do. The authors themselves, however, invited us to view their study in a broad context, by presenting it as "a controlled study of two of the most common models of posthospital care—an intensive day hospital (called 'transitional treatment') versus weekly outpatient group therapy" (p. 1551).

I believe that further research is needed before more definite conclusions can be drawn about the utility or the economy of transitional day treatment.

REFERENCES

- Vaughan PJ: Developments in psychiatric day care. Br J Psychiatry 1985; 147:1-4
- Fink EB, Longabaugh R, Stout R: The paradoxical underutilization of partial hospitalization. Am J Psychiatry 1978; 135:713– 716
- 3. Glick ID, Fleming L, DeChillo N, et al: A controlled study of transitional day care for non-chronically-ill patients. Am J Psychiatry 1986; 143:1551–1556
- Gudeman JE, Shore MF, Dickey B: Day hospitalization and an inn instead of inpatient care for psychiatric patients. N Engl J Med 1983; 308:749-753

DAVID E. NESS, M.D. White Plains, N.Y.

Dr. Glick and Associates Reply

SIR: We certainly agree with most of Dr. Ness's rhetorical comments and believe strongly in day hospitals. However, we cannot follow his logic in stating that since the sample consisted of patients with presumably better prognosis, the finding of no difference between groups "vitiates" the results. This is precisely the question we asked: Given this sample, does the extra time and effort in a day hospital result in better outcome? Perhaps we failed to make clear the purpose of the study, i.e., "to test the clinical notion that day hospital candidates with nonchronic illness [italics not in original article] would benefit more from an intensive intervention than a limited program" (p. 1556). This study sample was from the population most often referred to acute-care, short-term day treatment (i.e., patients with a relatively high level of functioning). The answer was a surprise—at least to us and perhaps to others who are prescribing this kind of treatment.

We further agree that a study with "seriously ill schizophrenic patients" may be needed, and likewise (for reasons related to our always tenuous sense of self-esteem), we could not agree more that "it is unfair to criticize Dr. Glick and colleagues for not having done a different study from the one they set out to do." Why it should be different, since we studied "two of the most common models of posthospital care," is unclear to us. We agree that a study of short inpatient stay plus a transitional treatment program versus standard inpatient stay is needed (and in fact we considered doing one), but this obviously requires a separate study.

We are happy to provide on request the complete data on our criteria for admission (in brief, the usual ones for voluntary patients in New York City) and length of stay (average=35 days), but since these were the first data we had on the use of our day hospital to reduce inpatient days, we cannot speak to the issue of whether stays were reduced; we designed an evaluation soon after we started our program.

We think the real dilemma is the same one we faced: accepting the results of the study in light of our bias to favor day hospital treatment and to feel instinctively that it is a superior modality. We also agree that further research is needed.

IRA D. GLICK, M.D. LORAINE FLEMING, R.N., M.A. NEAL DECHILLO, M.S.W. NEIL MEYERKOPF, M.S.W. New York, N.Y.

Poetry and Psychopathology

SIR: As a psychiatrist and a poet, I looked forward to publication in the *Journal* of the Meyers' article "Self-Portrayal by a Depressed Poet: A Contribution to the Clinical Biography of William Cowper" (1). It is all too rare that issues related to the complex interaction between creative work and psychopathology appear as cover articles in our leading psychiatric journals.

However, despite the scholarly nature of their work, the Meyers steered clear of asking the question, What, if anything, does Cowper's having been a poet have to do with either the origins or the course of his particular mental illness? In fact, the Cowper whom we met in the Meyers' "clinical biography" only once referred to his unique occupation, when he called himself, with characteristic humility, "an industrious rhymer." Although it was mentioned that reading poetry afforded Cowper some relief from his inner anguish, the reader was left to guess whether the act of writing poems—poetry being an art form that is frequently "written with the nerves"—was experienced by him as therapeutic or as something which contributed to his mental instability.

Perhaps these issues seem more pertinent in the study of poets and other artists who are nowhere near as incapacitated by affective illness and suicidal tendencies as Cowper no doubt was. His was certainly an extreme case, and, in fact, few people as disturbed as he was ever rise to the challenge of writing publishable verse, let alone concurrently translating Homer. Perhaps it is the biological cast that his illness took on which prevents students of his life from asking questions related to occupational benefits or hazards.

In our own time, in our outpatient practices, pocts and other artists who come to us for help usually absorb themselves in a kind of creative work which is more fragmented—and which perhaps "stretches the sanity" of the incividual more—than the kind of peaceful, almost "occupational therapy" variety of verse that Cowper wrote. Among writers, in fact, Cowper is known as the most disturbed of all English poets, who, paradoxically, wrote the sanest of all verse (2).

REFERENCES

- 1. Meyer J-E, Meyer R: Self-portrayal by a depressed poet: a contribution to the clinical biography of William Cowp r. Am J Psychiatry 1987; 144:127–132
- The Norton Anthology of English Literature, vol 1. Nov York, WW Norton, 1968, pp 1776–1777

RON CHARAC i, M.D. Toronto, Ont. Canada

Dr. Meyer and Ms. Meyer Reply

SIR: Dr. Charach has missed some comments in our study concerning the interaction between Cowper's psychopathology and his poetry. He would like to know whether writing poems had for Cowper a therapeutic effect or whether it contributed to his mental instability. There are two reasons why Cowper's poetry was not taken into consideration in our clinical biography. 1) Since the nineteenth century, several psychiatric studies have dealt with his affective illness and his productivity as a poet. 2) The topics of Cowper's poems and the way in which he handled them correspond so much to those of the pre-Romantics that it is not pessible to differentiate between the style of poetry in this period and the expression of his melancholic experiences.

Our study was intended to evaluate the 400 letters in which Cowper, with his poetic talent, described so vividly the symptoms of his depressive illness and the one happomanic attack. Minor depressive states may lead to an intensified engagement that can strengthen artistic expression, whereas more severe depression blocks talent. Cowper was certainly not the only artist so severely handicapped by derangement. The contrast between the "industrious rhymen" when healthy and his "dejection of spirits" when depressed is by no means unusual.

JOACHIM E. MEYER, M.D. RUTI: MEYER Göttingen, Federal Republic o, Germany

Correction

In the article "Profound Hypoglycemia With the Addition of a Tricyclic Antidepressant to Maintenance Sulfonylurea Therapy" (September 1987 issue, pp. 1220—1221) by Bev L. True, Pharm.D., et al., the degree for Elizabeth A. Burns should have been listed as M.D.

The staff regrets this error.

Reprints of letters to the Editor are not available.

Guidelines on Confidentiality

This statement was drafted by the Committee on Confidentiality.^a It was passed by the Assembly in May 1987 and by the Board of Trustees in June 1987.

INTRODUCTION

Whatsoever things I see or hear concerning the life of man, in any attendance on the sick or even apart therefrom, which ought not to be voiced about, I will keep silent thereon.

-Hippocratic oath

Psychiatrists should not discuss their patients with anyone who is not directly involved in their patients' care. They should limit the material that they enter into their patients' records to only that which is clearly necessary for their patients' care, and they should protect these records from being divulged to anyone without their patients' freely given and informed consent. Where a patient has been judged incompetent to make these decisions for him- or herself, the court-appointed guardian should act on the patient's behalf; where there are clinical questions about a patient's competence to give a valid consent but no such legal determination has been made, it is advisable to obtain the concurrence of responsible family members to any consent obtained.

Keeping patients' confidences is part of a psychiatrist's ethical and legal duty. Any breach of such confidence by a member of the American Psychiatric Association (APA) may lead to admonishment, reprimand, suspension, or even expulsion. In a number of states, breach of confidentiality may also be judged to be unprofessional conduct and grounds for suspension or revocation of the psychiatrist's license to practice medicine. It can even be a basis for civil litigation or criminal action against the psychiatrist. Psychiatrists should be careful, however, not to inadvertently use confidentiality as an excuse to avoid working with relatives involved in their patients' care. The concerns of relatives for information about seriously disturbed patients need to be addressed and should not be dismissed summarily under the guise of confidentiality.

At times, psychiatrists' duties regarding confidentiality come into conflict with their other professional responsibilities. When this happens, the psychiatrist must balance the welfare of the patient against the welfare of society. Almost all states have statutes requiring psychiatrists and other physicians to report to government authorities certain conditions, such as infectious diseases and child abuse. In cases involving imminent danger to others, psychiatrists must balance their duty to protect their patients' confidences against their responsibility to the members of the public at risk. Whenever

^aThe committee included Aron S. Wolf, M.D. (chairperson and Assembly liaison), Richard Bridburg, M.D., J. Richard Ciccone, M.D., Edward C. Kirby, Jr., M.D., Daniel A. Deutschman, M.D., Anthony J. Reading, M.D., George R. Caesar, M.D., Cynthia Rose, M.D., and Jerome Beigler, M.D. (consultant).

feasible, psychiatrists should inform their patients of the general limits of confidentiality at the onset of treatment.

The application of these principles is at times fraught with difficulty. The guidelines that follow are intended to help the practicing psychiatrist deal with the issue of confidentiality in a variety of special circumstances. When in doubt, however, the wisest course of action is to consult a senior colleague or the ethics committee of the local psychiatric association. As the details of statutes about confidentiality and records vary considerably from state to state, psychiatrists should become familiar with the requirements of the localities in which they practice. The APA or the county medical society can generally be contacted for such information. However, no set of fixed guidelines about confidentiality can be fully responsive to new and emerging societal issues or changing circumstances of practice, such as the problems of confidentiality currently posed by AIDS infections. As APA continues to address these issues, these guidelines will be appropriately revised and updated.

CONFIDENTIALITY IN SPECIAL SITUATIONS

Minors

Parents and legal guardians are entitled to relevant medical information about children for whom they are responsible and, where appropriate, should be included in the treatment. Minors themselves also have rights regarding confidentiality and must feel free to talk about their parents and other adults without fear of reprisal. Extraneous information that the child would not want the parents to know should not be discussed with the parents or included in the chart. However, information that parents need to make informed decisions about their child's care must be provided to them. Child and adolescent patients should be informed about the nature of the information about them that may be shared with their parents. At a level appropriate to the child's age, he or she should also be informed about the limits to confidentiality in the particular therapeutic situation.

Parents of young minors have the authority to make decisions, the right of access to information, and the power to waive the patient-physician privilege. Unless information is sensitive, embarrassing, or likely to exacerbate the problem, parents should be kept informed. The issue of parental authority is less clear with teenagers, especially as they approach the age of majority. Although the rights of adolescent patients to confidentiality may be limited, the need for confidentiality in their treatment parallels that of adults. Withholding of information from the parents is often a necessary condition for therapy, except when risk to life or other major danger justifies a breach of confidentiality. In most situations, adolescent patients should be encouraged to inform their parents themselves about matters the parents need to know. No matter how tedious and complex, confidentiality considerations exert a powerful influence on treatment outcome in teenage patients.

To release information about a minor patient, the signature of either parent is generally adequate except in a case of divorce or custody, in which case the signature of a custodial parent or agency is required. In releasing information about an adolescent, however,

it is desirable to have both patient and parent sign the consent document. In a case of actual or suspected child abuse, the legal obligation to report the relevant information takes precedence over confidentiality in order to protect the child. These statutes differ among jurisdictions and, for the most part, neither authorize nor require the psychiatrist to disclose all information about a patient or every instance of abuse. For example, some states require the reporting of all instances of past abuse, while others limit this duty to individuals who are minors at the time the psychiatrist learns of the allegation. Similarly, some states specifically delineate what information the psychiatrist is required to report. For this reason, psychiatrists should take care to acquaint themselves with the laws governing the states in which they practice. Psychiatrists usually have qualified immunity for permitting release in such cases.

Group and Family Therapy

Although all group therapy participants should be expected to respect the confidences shared with them by other group members, the psychiatrist generally has no way of enforcing this. Some jurisdictions do, however, have legal requirements for group therapy participants regarding confidentiality. All new group members should be apprised of their responsibility to keep confidential matters that are discussed in the group and of the inherent limitations associated with this process. Because of these limitations, issues of trust and distrust can be expected to surface in the group and may be explored by it in a productive manner. In keeping records of group therapy, no reference to other patients in a manner that would identify them should be included in any individual chart. To keep a separate record of group interactions, the psychiatrist may make notes about the group that are not included in the individual charts.

In family therapy, although it may be preferable to keep records on a family basis, it is usually more practical to keep them in one of the participant's individual charts, as most facilities maintain records in this manner. Since authorization from the patient named in the chart is generally sufficient for the release of information, care must be taken about information included about other family members. Whether or not the record is kept on an individual or a family basis, it may be wise to have all of the involved family members sign a statement at the beginning of therapy acknowledging that it will contain information about all of them and specifying which signatures or combination thereof will be required to authorize access to the chart or release information from it. In the event of substantial family change, such as divorce or a child's reaching majority, particular care should be exercised not to release information inappropriately.

A Patient's Death

Many patients are concerned that their affairs not become public knowledge after they die. Psychiatrists should remember that their ethical and legal responsibilities regarding confidentiality continue after their patients' deaths. A psychiatrist may be asked to disclose information about a deceased patient to relatives coping with their reactions to the death, contemplating a malpractice action, or contesting a will, to law enforcement agencies, such as the police, or to the Internal Revenue Service.

States that permit patients' access to their own records generally permit access by specified third parties (executors, administrators, or next of kin). The release of information about a deceased patient to other parties should be made only after the receipt of appropriate court documentation. In cases in which the release of information would be injurious to the deceased patient's interests or reputation, care must be exercised to limit the released data to that which is necessary for the purpose stated in the request for information.

Evaluation on Behalf of a Third Party

Psychiatrists are often requested to evaluate individuals on behalf of third parties, such as courts, employers, government agencies, the military, prisons, workmen's compensation boards, or employee assistance programs. Care must be taken before proceeding with the evaluation to inform the individual of the need to make a report to the third party and of the limitations this places on conficentiality. The psychiatrist also has a responsibility to the individual to limit the material contained in the report to matters relevant to the purposes for which it has been requested, excluding any extraneous material that the individual has disclosed in the course of the evaluation. The medical record should contain a notation that the individual has been advised that anything he or she says during the evaluation may be included in the report that the psychiatrist has to make. While the report and related medical record should not be released to the individual without the consent of the third party authorizing it, permission to do so is generally forthcoming. The psychiatrist may request such authorization as a condition of performing the evaluation.

Treatment at the Request of a Third Party

Psychiatrists are asked at times to undertake treatment of patients on behalf of third parties, such as workmen's compensation boards, the military, or prisons. The third party may require access to the ongoing record in the patient's medical chart as a precordition of such treatment. The patient should be clearly informed of the limitations on confidentiality in the particular case and advised to accordingly. In such an instance, the psychiatrist should take care to limit the record to information that is necessary for treatment.

CONFIDENTIALITY AND RECORDS

Maintaining Records

In many jurisdictions, psychiatrists are required to keep contemporaneous and retrievable records of the evaluation and treatment of all patients for whom they undertake medical responsibility. Each of the following items may be of value in such a record, all decumented by date: 1) relevant information obtained, 2) findings on examination, 3) tests and procedures ordered and the results thereof, 4) diagnostic conclusions, 5) treatment prescribed, and 6) plans for further care. For psychiatric patients, such issues as suicide, commitment, and potential dangerousness should also be fully documented. The well-kept record serves a number of functions. It provides a longitudinal archive for the treating psychiatris, it allows for an orderly transfer of patient care should this become necessary, it allows a clear and concise way to substantiate billing, and it provides a clear record of what has occurred should there be any legal proceedings. The medical record must be maintained for a given period after treatment has been terminated, although the time limit for this varies from state to state.

The psychiatrist should be particularly sensitive to the difficulties involved in protecting the confidentiality of psychiatric records in settings where access is difficult to control, such as hotoitals and public clinics. Because of this, and because of increasing cemands to release information to third parties, the information in a medical record should be limited to that which is necessary to meet the requirements of law and to maintain a documented data base appropriate for continued treatment. Extraneous and irrelevant material should be kept to a minimum, as should material that is sensitive or potentially damaging to the patient or other persons.

The psychiatrist may keep informal personal work rotes on a given case, independent of the official medical record. These should be kept physically separate from the medical record and should not be used as a substitute for it. Psychiatrists can record their impressions and speculations in these work notes, as well as verbatim and process notations, other sensitive information, and it formation from third parties. Psychiatrists should be aware, however, that such personal notes are protected from disclosure only in a limited number of jurisdictions.

Patient Access to Records

In the current atmosphere of increased participation by patients in their own care, requests are often made that they be given their own records or be permitted access to them. Actual medical records made and maintained by psychiatrists belong to them or to the clinics or hospitals in which they work, and there is no obligation to relinquish them to patients. In many jurisdictions, however, the patient has the right to inspect and/or have a copy of the medical record if he or she requests. Some states limit this access and permit the psychiatrist to withhold from the patient information that would have a negative impact on his or her health or well-being, although the record must be released to other physicians of the patient's choosing. Psychiatrists should become familiar with the laws governing patient access to records in the jurisdictions in which they practice.

Release of Records to a Third Party

Psychiatrists and other physicians are constantly asked by a variety of third parties to release information about their patients. The majority of these releases are from insurance carriers, but they may also be from other health care providers, from administrative bodies, and from various components of the legal system. Generally, such a request is accompanied by a written authorization signed by the patient. Many states have statutes that address the form and duration of consent, the type of information that may be released, and restrictions governing disclosure. Psychiatrists should thus familiarize themselves with any special provisions that apply in the jurisdictions in which they practice.

No information about patients should be released to parties not directly involved in their care without their explicit, written permission unless such releases are required by law or by court order. The patient's consent to the release of information from his or her medical record should be informed and given freely, without threat or coercion. In practice, however, this is often not the case. To receive insurance benefits to which they are otherwise entitled, for example, patients are frequently requested to sign open-ended, blanket releases without restrictions on the type of information to be released. For their consent to be informed, patients should appreciate the nature and content of the information to be released, the purposes for which it will be used, the manner in which it will be protected, and the extent to which any of the information may be redisclosed to other parties. Logically, it is not possible to give a fully informed authorization before the care itself has been rendered and the patient has had an opportunity to review the information involved. Authorizations that accompany requests for release of information, however, frequently predate much of the information requested.

In the absence of clear legal guidelines on how to proceed when the authorization for the release of information is questionable, the psychiatrist should take care to protect the patient's interests. If he or she has any questions about whether the patient understood the nature and extent of the disclosure involved or is concerned about the release of sensitive or harmful material, the psychiatrist should contact the patient and discuss these matters before releasing the information. As always, the psychiatrist should take care to limit the information disclosed to that which is relevant to the particular purpose of the request.

Psychiatrists may occasionally receive requests for information about patients over the telephone or through other informal channels. Except in matters of medical emergency, no release of information should be made without the patient's specific approval and no information should be given or sent to anyone unless the psychiatrist has reasonable certainty of that individual's identity. A psychiatrist should not acknowledge that an individual is or was under his or her care without the patient's specific approval.

Sharing Records With Consulting Health Care Professionals and Agencies

Generally, the sharing of clinical information with a consultant directly involved in the care of a given patient does not require specific authorization, provided that the patient has approved of the consultation. Similarly, a letter of referral to another health care professional or a letter in reply to such a referral does not need specific authorization if the patient has approved the referral. Care must always be taken to limit materials sent through the mail and to indicate clearly that the material is "Personal and Confidential" for

the addressee. Where there is any doubt about the appropriateness of sharing clinical information with another professional, a release from the patient should be obtained.

Many practitioners and psychiatric clinics have formal joint service and consultative arrangements with other health care providers that involve conjoint care of certain patients. Whenever clinical information is shared between such practitioners and agencies, written agreements should be developed that specify the amount and type of material that may be transmitted between them in providing collaborative care. Patients should be notified of the arrangements and have the option of having their records not shared in this manner, even if this deters optimum care.

Redisclosure of Records

Psychiatrists may possess copies of patients' medical records that have been obtained from other health care providers. Patients' authorizations for psychiatrists to release information to other parties do not cover the release of these records unless they are specifically included in the release and their re-release is not otherwise prohibited.

The laws about redisclosure of medical information that has been sent to insurance companies, government agencies, and others not involved in providing health care are much less clear. In many instances, these bodies are not legally prohibited from releasing medical information to other parties. The ever-present possibility of such redisclosure should caution psychiatrists to be extremely prudent about the information released to them. Nonmedical agencies and organizations are not bound by the same ethical standards as health professionals regarding the confidentiality of medical records that come into their possession. Although most take reasonable precautions to protect such data, access to these data is not formally regulated and redisclosure to other parties may occur with relative ease.

Physician's Death or Retirement

When psychiatrists sell their practices or are about to retire, the confidentiality of their records must be maintained, as these are kept available for patients who desire access to them. A useful procedure is to notify each contactable patient of the practitioner's intent and ask the patient to choose one of three alternatives on a return postcard: 1) transfer of records to a designated successor, 2) transfer of records to a practitioner of the patient's choice, or 3) transfer of the records to a place of safekeeping until the statutory requirement for retention has expired. When necessary, a notice may also be placed in the local newspaper requesting former patients to contact the psychiatrist's office about disposition of their records. In the event of the death of the practitioner, patients should be notified of the event in the same way and given the same options. Should there be no response from a patient, the records should be stored in a suitable facility for the required period of time and then destroyed.

Computerized Records

With the development of large, computerized information networks to process certain aspects of medical records, the potential for harm to confidentiality is considerable. When the record itself is computerized, either in the office, the clinic, or the hospital, extreme care should be taken to guard against inappropriate access to the information contained. Whatever the system of safeguards installed, it is wise to determine whether it is "leakproof" with regard to confidentiality by having an outside expert challenge it. When there is electronic transfer of data between different information systems, such as between a clinic and a third-party payer, particular care must be taken to limit the information transferred to only that which is necessary for the purpose involved, abiding by the same standards as in the transfer of written material. The security of such linked systems should also be tested from time to time to determine their ability to safeguard confidentiality. Psychiatrists should be aware that once medical data are entered into nonmedical information systems, little can be done to protect these data from unwarranted access or inappropriate use. The psychiatric profession has a responsibility to limit the amount of information transferred into such systems, to help monitor them, and to educate the public about the potential dangers involved.

CONFIDENTIALITY IN SPECIAL SETTINGS

Private Practice

Psychiatrists in private practice must set up record-keeping systems in such a manner that confidentiality is ensured. Patient charts should be kept where they can be securely locked up when not in use. All personnel working for the psychiatrist should be informed of the tenets of confidentiality and made aware that they may not talk about patients or give out any information about them to anyone without the patients' explicit permission. Office personnel should be instructed to check that the authorization statement is signed and appropriate before releasing written information to anyone, including third-party payers. When in doubt, they should be instructed to check with the psychiatrist before acting.

Psychiatric Clinics and Hospitals

In multipractitioner mental health clinics and facilities, record storage is generally centralized in such a way that a number of people have access to records. All personnel handling medical records should be apprised of their confidential nature. Procedures should be established to ensure that access to a patient's chart is limited to personnel directly involved in the patient's care and that information is not released without appropriate authorization. Nonetheless, psychiatrists in these settings should take care to limit information contained in medical records to the minimum required for good care and documentation.

The sharing of relevant information between psychiatrists and the other clinic and hospital personnel who are involved in the direct treatment of their patients does not require authorization. However, caution must be exercised in these settings not to reveal personal information about patients without their authorization to other personnel or to representatives of other agencies involved in the patients' care, such as schools or social service programs.

Psychiatrists should be aware that special federal regulations govern confidentiality in federally funded drug and alcohol abuse programs covered under PL 92-282. Further information about these additional restrictions on the release of information can be obtained from the relevant state agencies.

General Hospitals and Multispecialty Clinics

In a general hospital, multispecialty clinic, or health maintenance organization, the psychiatric record may be included in the general medical record. The psychiatrist should be aware that it may not be possible to protect access to such records with the same care provided for records that are strictly psychiatric in nature. Because of this, the psychiatrist should exercise particular care not to include sensitive or embarrassing material in these records. When discussing a patient with another member of the staff, the psychiatrist must also exercise care to limit what he or she says to only the information necessary for the patient's care, omitting all other aspects of the personal history with which he or she has become acquainted.

Training Facilities

Maintaining confidentiality in training settings often poses special problems. All trainees should be informed of the professional responsibilities they are assuming and of their obligation to hold in confidence information they receive about patients. Special care must be taken by faculty and trainees alike not to discuss patients in corridors, elevators, or other public places where they may be overheard. When patients are presented at teaching conferences, their freely given consent must be obtained and care must be used not to identify them unnecessarily or to divulge sensitive material not directly pertinent to the presentation.

Training facilities should make their teaching role and its impli-

cations explicit in the documents that patients sign at the time of admission. Specific authorization is then not required for a systical to discuss the cases with trainees participating in programs approved by the institution. Trainees who make entries in patient records should be instructed carefully about the issues of confidentiality involved and the need to exercise appropriate cautic in what they include. Psychiatric residents who wish to make detailed "process" notes for discussion with their supervisors should generally keep these separate from official records and destroy and notes as soon as their use is over.

In training institutions, audio and video recordings of patients are occasionally made for teaching purposes. Disclosure of the patients to persons not directly involved in the care of the patients cannot be made without the patients' written authorized to the making such recordings, it is wise to have patients authorized both the recordings themselves and the specific educational paraboses for which they may be used, making provision for the patients to withdraw their consent at a later time if they so wish, similarly, psychiatrists should take care not to disclose or make use constitutions artwork or other creative products in ways that would identify there in lectures and publications unless the patients' explicit pennission is obtained.

Research studies that involve patients should not ice afy these patients in any way without their specific, written approval. Even then, care must be taken to limit access to confidential in tertal and safeguard patients' privacy. Case material used for tea ging purposes and in scholarly reports should be edited carefully of remove all identifying information about patients. When this annot be obtained,

CONFIDENTIALITY AND THE LEGAL PROCESS

Physician-Patient Privilege

Physician-patient privilege is a legal concept designed to protect confidential medical information from disclosure in a tricial proceeding. Physician-patient privilege is created by statue, and its scope and limitations vary from state to state. Such privilege is the property of the patient, not the doctor, and may only be warved by the patient or his/her legally authorized representative.

This privilege covers most communications made by during the treatment relationship, the psychiatrist's of conclusions, and diagnoses, and the medical records of these. Communications and observations made for purposes there then purposes include examinations made upon court order, to remploy ment, or for qualification for insurance. Disclosures aphysician in the presence of a third party not directly in a wed in the patient's treatment and disclosures to the physician's star may also not be covered by this privilege.

When asked to testify in court or by deposition about information, a psychiatrist must decline to proceed unless the patient or the patient's legal representative executes a valid waive or unless the psychiatrist is compelled to provide the information between when so authorized or compelled, if the psychiatristic feels that the disclosure would be unethical or damaging to the passes should resist within the full limits of the law by as a matter of conscience, still refuse to divulge the information requested, although he or she is then at risk of being held is contempt by the court. When in doubt, ethical considerations require that the psychiatrist give priority to the right of the patient to considertiality and to unimpaired treatment.

The psychiatrist should always leave the interpreta on of the scope and limitations of privilege to the courts and the legal system. Almost all states limit the physician-patient and psych otherapist-patient privilege in some way. For instance, these provileges are commonly not available when patients themselves put their mental conditions in issue in lawsuits and may not be held valid in certain criminal proceedings, commitment proceedings, will on the state of the conditions of the conditions in issue in lawsuits and may not be held valid in certain criminal proceedings, commitment proceedings, will contain the conditions of the court of the cou

psychiatrist must be careful to disclose only material that is relevant to the matter at hand.

Subpoena

A subpoena is a process to cause a witness to appear and give testimony in a legal proceeding. A *subpoena duces tecum* is a process by which the court commands a witness to produce a document or record that is pertinent to the issues of a pending case, generally for use in trial preparation.

A subpoena does not in and of itself represent a legal compulsion to release information. Subpoenas are issued routinely by a clerk of the court and represent only a "command to appear." It is the psychiatrist's responsibility to protect the confidentiality of the patient by making certain there is an appropriately authorized release of information. A subpoena, by itself, does not represent an appropriate release, for the court has not studied or ruled on the confidentiality of the information involved. Upon receipt of a subpoena, however, the psychiatrist is compelled to make a response.

If a subpoena is accompanied by an appropriately signed consent form and the psychiatrist is satisfied that the authorization is informed and voluntary, he or she is free to testify at the proceedings and provide any documents requested. If there is no consent form attached, the psychiatrist should contact the patient or the patient's attorney to determine if the patient will consent. If the patient does not wish to consent, the psychiatrist has two choices. The first is to retain an attorney or cooperate with the patient's attorney to file a motion to quash the subpoena on the grounds that the communication involved is privileged; in most cases, the ruling on this motion by the court will settle the issue of whether the psychiatrist must testify and turn over the records. The psychiatrist's second option is to attend the deposition or trial on the date specified, bringing any documents called for, but, when first asked about the patient, assert the physician-patient privilege and refuse to answer any further questions until the court rules on whether he or she has to testify.

Deposition and Testimony

Psychiatrists are occasionally called to testify at depositions or trials about the health and emotional status of present or former patients. In any such case, the psychiatrist is obligated to assert any rights the patient has with regard to the privileged nature of their relationship. There is generally no difference between a deposition and a trial in the nature of the privilege or of the psychiatrist's duty, although at a trial a judge will be present to rule immediately on questions regarding the scope of privilege.

If the privilege has been waived by the patient or the patient's legally appointed guardian, the psychiatrist is free to testify and to provide documents concerning his or her testimony. However, the psychiatrist retains an ethical obligation to disclose only information that is actually relevant to the purpose at hand. If the information requested seems far afield, the psychiatrist should question the need for disclosing it until a judge has had the opportunity to rule on its necessity. At a trial, the judge will generally make such a ruling at the

time the issue is raised; at a deposition, it may be necessary for the psychiatrist to refuse to testify on this matter until a judge has had an opportunity to rule.

Psychiatrists may also be asked for purposes of the court to examine and evaluate individuals with whom they do not have treatment relationships. Depositions and testimony in such cases are not covered by physician-patient privilege. In these instances, it is essential that before commencing the psychiatrist inform the individual of the nature and purpose of the evaluation and of the limits to confidentiality.

Reporting Statutes

The responsibility that psychiatrists have to keep their patients' confidences may come into conflict with other responsibilities they have to the community at large. Over the years, society has decided that it has an overriding interest in protecting certain needs of the public, even at the risk of disclosing some information patients might wish to be kept confidential. The prototype of such laws is the reporting of contagious diseases, beginning over a century ago. More recently, statutes have been enacted requiring that psychiatrists and other physicians report cases of actual and suspected child abuse to appropriate public authorities, including cases of child sexual abuse. Now a growing number of states have begun to require the reporting of abuse of the elderly.

The intent of these laws is to protect the public from future harm. Except for child abuse, there is generally no legal requirement to report past instances of crime or misdeeds. Learning that a patient has committed a serious crime in the past, however, presents many difficulties in the therapeutic process. Because of these complexities, consultation with a senior colleague and a knowledgeable attorney is well advised in such cases.

The Duty to Protect—the Tarasoff Doctrine

For psychiatrists, probably the most perplexing area of conflict between their duties to their patients and to society involves what has come to be called the Tarasoff doctrine. Following a California case decided in 1974, this doctrine has gradually evolved to the point where psychiatrists today may be held responsible for protecting parties whom their patients seriously threaten, particularly when these other persons have been specifically identified. Where the threat is imminent, the patient may need to be hospitalized, either voluntarily or by commitment. When this is not sufficient to remove eventual danger to the third party, the psychiatrist may still be held responsible for taking steps to protect the third party, although the exact nature and limits of such responsibility are still not clear. Under the provisions of recently enacted statutes in California and other states, however, notification of the threatened individual and the calling of a police department are sufficient to provide immunity from liability to the psychiatrist, even if the threatened harm occurs. The ethical, legal, and professional issues involved in the treatment of such potentially dangerous patients are among the most difficult ones faced by the practicing psychiatrist and generally warrant consideration of both professional and legal consultation.



Helps Meet <u>Both</u> Goals Of Insomnia Therapy

mproved Sleep



Daytime Alertmess

- Rapidly Absorbed
- Promptly Excreted

Upjohn

Kalamazoo, Michigan 49001 USA

© 1987 The Upjohn Company

Please see adjacent page for brief summary of prescribing information.

Halcion® Tablets

(triazolam) @

INDICATIONS AND USAGE: HALCION Tablets are indicated in the short-term management of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings, and/or

early morning awakenings.
It is recommended that HALCION not be prescribed in quantities exceeding a one-month supply.

CONTRAINDICATIONS: Patients with known hypersensitivity to this drug or other

HALCION is contraindicated in pregnant women due to potential fetal damage. Patients likely to become pregnant while receiving HALCION should be warned of the potential risk

WARNINGS: Overdosage may occur at four times the maximum recommended therapeutic

dose. Patients should be cautioned not to exceed prescribed dosage.

Because of its depressant CNS effects, patients should be cautioned against engaging in hazardous occupations requiring complete mental alertness and also about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Anterograde amnesia and paradoxical reactions have been reported with HALCION and

some other benzodiazepines.

PRECAUTIONS: General: In elderly and/or debilitated patients, treatment should be initiated at 0.125 mg to decrease the possibility of development of oversedation, dizziness, or imat 0.125 mg to decrease the possibility of development of oversedation, dizziness, or impaired coordination. Caution should be exercised in patients with signs or symptoms of depression which could be intensified by hypnotic drugs. Suicidal tendencies and intentional overdosage is more common in these patients. The usual precautions should be observed in patients with impaired renal or hepatic function and chronic pulmonary insufficiency. Information for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing prescribed dosage, (e) possible worsening of sleep after discontinuing HALCION. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistaminics, ethanol, and other CNS depressants. Pharmacokinetic interactions of benzodiazenines with other drugs have CNS depressants. Pharmacokinetic interactions of benzodiazepines with other drugs have been reported, e.g., coadministration with either cimetidine or erythromycin reduced clearance, prolonged elimination half-life, and approximately doubled plasma levels of triazolam, hence increased clinical observation and consideration of dosage reduction may be appropriate. Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of carcinogenic potential was observed in mice during a 24-month study with HALCION in doses up to 4000 times the human dose. Pregnancy: Benzodiazepines may cause fetal damage if administered during pregnancy. The child born of a mother who is on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity during the postnatal period. Nursing Mothers: Administration to nursing mothers is not recommended. Pediatric Use: Safety and efficacy in children below the age of 18 have not been established.

ADVERSE REACTIONS: During placebo-controlled clinical studies in which 1003 patients received HALCION Tablets, the most troublesome side effects were extensions of the pharmacologic activity of HALCION, e.g., drowsiness, dizziness, or lightheadedness.

	HALCION	Placebo	
Number of Patients	1003	997	
% of Patients Reporting:			
Central Nervous System			
Drowsiness	14.0	6.4	
Headache	9.7	8.4	
Dizziness	7.8	3.1	
Nervousness	5.2	4.5	
Lightheadedness	4.9	0.9	
Coordination Disorder/Ataxia	4.6	0.8	
Gastrointestinal			
Nausea/Vomiting	4.6	3.7	

In addition, the following adverse events have been reported less frequently (i.e., 0.9-0.5%): euphoria, tachycardia, tiredness, confusional states/memory impairment,

cramps/pain, depression, visual disturbances.

Rare (i.e., less than 0.5%) adverse reactions included constipation, taste alterations, diarrhea, dry mouth, dermatitis/allergy, dreaming/nightmares, insomnia, paresthesia, tinnitus, dysesthesia, weakness, congestion, death from hepatic failure in a patient also receiving diuretic drugs.

The following adverse events have been reported in association with the use of benzodia-zepines: dystonia, irritability, anorexia, fatigue, sedation, slurred speech, jaundice, pruritus, dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention.

As with all benzodiazepines, paradoxical reactions such as stimulation, agitation, in-creased muscle spasticity, sleep disturbances, hallucinations and other adverse behavioral effects may occur rarely and in a random fashion. Should these occur, use of the drug should be discontinued

No laboratory changes were considered to be of physiological significance When treatment is protracted, periodic blood counts, urinalysis and blood chemistry

analyses are advisable.

Minor changes in EEG patterns, usually low-voltage fast activity have been observed in patients during HALCION therapy and are of no known significance.

DRUG ABUSE AND DEPENDENCE: Controlled Substance: HALCION Tablets are a Controlled Substance in Schedule IV. Abuse and Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Patients with a history of seizures are at particular risk. Addiction-prone patients should be closely monitored. Repeat prescriptions should be limited to those under medical supervision.

OVERDOSAGE: Because of the potency of triazolam, overdosage may occur at 2 mg, four times the maximum recommended therapeutic dose (0.5 mg). Manifestations of overdosage include somnolence, confusion, impaired coordination, slurred speech, and ulti-mately, coma. Respiration, pulse, and blood pressure should be monitored and supported by general measure when necessary. Immediate gastric lavage should be performed. Multiple agents may have been ingested.

Store at controlled room temperature 15°-30°C (59°-86°F)

Caution: Federal law prohibits discensing without prescription.

B-3-S

Upjohn THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA

J-7316 January 1987

INDEX TO ADVERTISTERS

NOVEMBER 1987

The publication of an advertisement in this journal doe not imply endorsement of the product or service by th American Psychiatric Association. AUSTEN RIGGS CENTERA2 BIOLOGIC SYSTEMS INC. BOEHRINGER INGELHEIM PHARMACEUTICALS INC. CHARTER MEDICAL CORP......A36-A3 DORSEY PHARMACEUTICALS HydergineA11-A12 Mellaril......A3 McNEIL PHARMACEUTICALS MEAD JOHNSON PHARMACEUTICALS DIVISION PDLAA43 **ROCHE LABORATORIES** ROERIG Sinequan.....A17-A18 SMITH, KLINE AND FRENCH LABORATORIES E R SQUIBB & SONS THE UPJOHN COMPANY HalcionA39-A40 WYETH LABORATORIES AtivanA15-A16

w Data on Lowadose Trifluoperazine

Reduced Symptoms in 86% of **Disturbed Elderly Patients**





trifluoperazine HCI Tablets: 1, 2, 5 and 10 mg. Concentrate: 10 mg./ml.

Before prescribing, please see adjacent page for a brief summary of prescribing information.

Before prescribing, see complete prescribing information in SK&F Co. literature or <u>PDR</u>. The following is a brief summary.

Contraindications: Comatose or greatly depressed states due to C.N.S depressants, blood dyscrasias; bone marrow depression; liver damage.

depressants. blood dyscrasias; bone marrow depression; liver damage.

Warnings: Tardive dyskinesia [TD] may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively bride treatment at low doses. There is no known treatment for TD, although it may remit if neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. If signs and symptoms of TD appear, discontinuation of neuroleptics should be considered. [See PRECAUTIONS.]

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex.

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex. has been reported in association with antipsychotic drugs. Clinical manifestations include: Hyperpyrevia, muscle rigidity, altered mental status and evidence of autonomic instability.

The management of NMS should include I immediate discontinuation of anti-psychotic drugs and other drugs not essential to concurrent therapy, 2 inten-sive symptomatic treatment and medical monitoring, and 3 it reatment, if available, of any concomitant serious medical problems.

'Stelazine' Concentrate contains sodium bisulfite, which may cause allergi stype reactions including anaphylactic symptoms or asthmatic episodes in cer-tain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and probably low and is seen more frequently in asthmatic than in non-asthmatic people.

asthmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive (e.g., have had blood dyscrasias, jaundice) to any phenothiazine. Caution patients about activities requiring aletness (e.g., operating vehicles or machinery), especially during the first flew days' therapy. Additive depressant effect is possible with other C.N.S. depressants, including alcohol. Do not use in pregnancy except when essential and potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuroleptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is contemplated.

Contemplated.

Use cautiously in angina. Avoid high doses and parenteral use when cardiovascular system is impaired since hypotension has occurred. Antiemetic effect
may mask the signs of overdosage of other drugs or obscure diagnosis and
treatment of certain physical disorders. Prolonged use of high doses may result
in cumulative effects with severe C.N.S. or vasomotor symptoms. If retinal
changes occur, discontinue drug. Agranulocytosis, thrombocytopenia,
pancytopenia, anemia, cholestatic jaundice, liver damage have been
renorted 1 Use cautiously in patients with diaucoma. reported. Use cautiously in patients with glaucoma.

reported. Use cautiously in patients with glaucoma. Patients with a history of long-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent <u>in vitro</u>, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenegic blockade. Concomitant use of phenothiazines with propranolol increases plasma levels of both drugs. Concurrent use of phenothiazines may counteract antihyperensive effects of guanethidine and related compounds. Thiazined diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytoin toxicity; dosage adjustments of anticonvulsarits may be necessary. If neuromuscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive 'Stelazine' 48 hours before or 24 hours after myelography with the contrast medium metrizamide. The presence of phenothiazines may produce false positive phenylketonuria (PKU) text results.

Adverse Reactions: Drowsiness, dzziness, skin reactions, rash, dry mouth.

Adverse Reactions: Drowsiness, dizziness, skin reactions, rash, dry mouth, insomnia, amenorrhea, fatigue, muscular weakness, anorexia, lactation, blurred vision. Neuromuscular (extrapyramidal) reactions: motor restlessness, dystonias, pseudo-parkinsonism, tardive dyskinesia, and a variant, tardive dystonia.

Other adverse reactions reported with Stelazine (trifluoperazine HCI, SK&F) or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

SK&F) or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma). Grand mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities; altered cerebrospinal fluid proteins; cerebral edema; prolongation and intensification of the action of C. N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, constipation, obstipation, adynamic ileus, ejaculatory disorders/impotence, priapism, atonic colon, urinary retention, misos and mydriasis; reactivation of psychotic processes, catatonic-like states, hypotensison (sometimes fatal), cardiac arrest, leukopenia, eosinophilla, pancytopenia, agivanulocytosis, thrombocytopenic purpura, hemolytic anemia, aplastic anemia, jaundice, biliary stasis, hyperglycemia, hypoglycemia, glycosura, menstrual irregularities, galactorrhea, gynecomastia, false positive pregnancy tests, photosensitivity, itching, erythema, urticaria, eczema up to exfoliative dermatitis, asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions, peripheral edema, reversed epinephrine effect, hyperpyrexia; mild fever after large LM. doses; increased appetite; increased weight; a systemic lupus erythematosus-like syndrome; pigmentary retinopathy, with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenicular and corneal deposits; neuroleptic malignants syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible Q and T wave distortions—have been observed. Temporary nausea, vomiting, dizziness, and tremulousness may follow abrupt cessation of high-dose therapy, NOTE: Sudden death in patients taking phenothiazines [apparently due to cardiac arrest or asphyxia due to failure of cough reflex] has been reported.

SK&F CO. Manufactured and distributed by

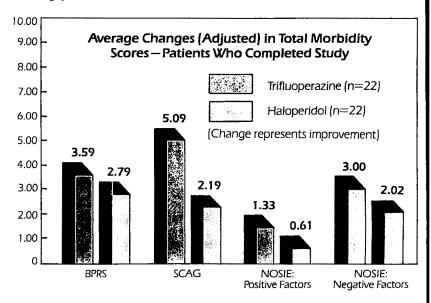
SK&F Co., Cidra, P.R. 00639

BRS-SZ:L61

@SK&F.Co., 1987

New Low-Dose Study

A six-week, double-blind study compared the safety and efficacy of trifluoperazine with haloperidol in the management of psychotic symptoms in disturbed elderly patients.



The compounds used in this study were haloperidol, USP, and trifluoperazine hydrochloride, SK&F, prepared in #2 opaque capsules. Data on file, Medical Department, Smith Kline & French Laboratories. Available on request.

Conclusions:

- Comparable efficacy in reducing symptoms of psychoses associated with chronic brain syndromes and senile psychosis in elderly patients
- Comparable type and incidence of adverse reactions
- No extrapyramidal symptoms (EPS) developed in patients on either drug

Favorable Safety Profile

Sedation was the most commonly reported adverse reaction. No extrapyramidal symptoms (EPS) developed, and minimal abnormal involuntary movements present in four patients at baseline showed no increase in severity during the trial.

Elderly patients should be observed closely since they appear to be more susceptible to hypertension and neuromuscular reactions.

Be sure you're the doctor...always specify





The Answer May Be On The Tip Of Your Tongue

PDLA Proudly Introduces CORTITEST™

The Saliva Depression Test

Is it depression or a medical disorder? PDLA's Saliva Depression Test* can help you make the determination.

The Dexamethasone Suppression Test (DST) is a widely applied laboratory determination used as a state marker for endogenous depression and objective predictor of treatment response. The test requires at least two post-dexamethasone blood draws for cortisol analysis. PDLA's Saliva Depression Test eliminates the need to draw blood samples.

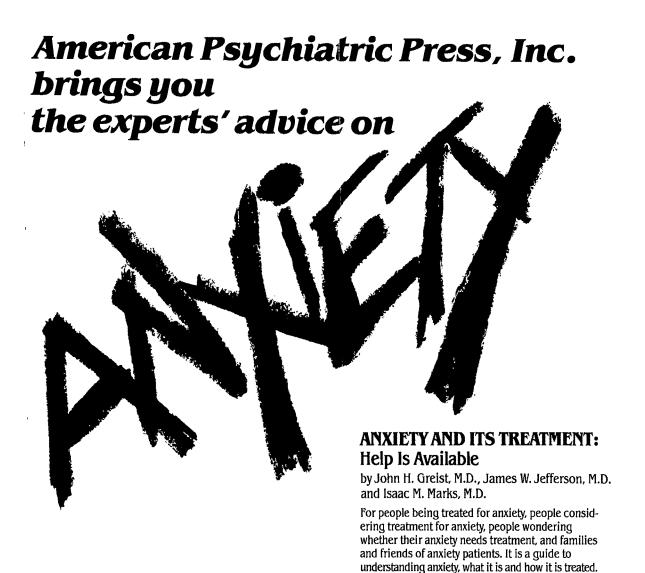
- Save time and money
- o Convenient sample collection
- Significant result interpretation
- Excellent correlation
- o Children or adolescents
- Difficult patients

For additional information, please return the coupon below or telephone: 1-800-237-PDLA.



Contact PDLA for clinical references regarding measuring cortisol in saliva.

Please send me	additional information and a free Saliva De	epression Test kit.		
Name				
Title	Hospital			
Address				
City	State	Zip		
Mail to: Psychiatric Diagnostic Laboratories of America, Inc. 100 Corporate Court, South Plainfield, New Jersey 07080				



Strengthen Your Medical/Self-Help Section

GETTING TOUGH ON GATEWAY DRUGS:

A Guide for the Family

by Robert L. DuPont, Jr., M.D. Foreword by Ann Landers

"Getting Tough on Gateway Drugs: A Guide for the Family, provides a gold mine of no-nonsense information." Ann Landers

ISBN 0-88048-046-7 • 6X9 • \$7.95 320 pages • softcover • 1984

DEPRESSION AND ITS TREAT-MENT: Help for the Nation's #1 Mental Problem

by John H. Greist, M.D., and James E. Jefferson, M.D.

ISBN 0-88048-025-4 • 5½X8¼ • \$7.95 128 pages • softcover • May 1984

HOW YOU CAN HELP: A Guide for Families of Psychiatric Hospital Patients

by Herbert S. Korpell, M.D.

156 pages • 1984 Casebound edition: ISBN 0-88048-016-5 • 6X9 • \$15.95 Softcover edition: ISBN 0-88048-026-2 6X9 • \$9.95

YOUR PHOBIA: Understanding Your Fears Through Contextual Therapy

by Manuel D. Zane, M.D., and Harry Milt

ISBN 0-88048-008-4 • 6X9 • \$15.95 280 pages • 1984

LAW, PSYCHIATRY, AND MORALITY: Essays and Analysis

ISBN 0-88048-212-5 • 6X9 • \$16.95 • 160 pages • 1986

by Alan A. Stone, M.D.
ISBN 0-88048-209-5 • 6X9 • \$9.95
294 pages • index • softcover •
May 1985



American Psychiatric Press, Inc. 1400 K Street, N.W., Washington, D.C. 20005

THE BEST CANDIDATE FOR YOUR POSITION OPENING MAY BE ONE OF *H&CP*'S 22,000 READERS



Psychiatrists, Psychologists, Nurses, Administrators, Therapists, Social Workers, Pharmacists, Educators

THEY ALL READ H&CP!

As the field's only monthly interdisciplinary journal, HECP is the one place you can advertise each and every professional staff vacancy that arises within your treatment facility.

No other primary journal offers such a diversified professional audience and provides such an efficient medium for spreading your advertising message to the mental health professionals you want to reach.

And H&CP's advertising rates are reasonable, too.

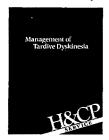
Why don't you let H&CP work for you?

For more information, call Lisette Gibson at (202) 682-6156.

H&CP ADVERTISING American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005

H&CP

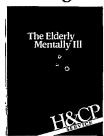
Tardive Dyskinesia



Our newest publication, Management of Tardive Dyskinesia: Collected Articles from H&CP, provides clinicians with practical and sensitive approaches to patients suffering from this disorder.

Includes overview, suggestions for management, discussions of legal risks, and recommendations for usage of neuroleptic drugs.

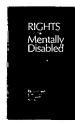
Treating the Elderly



The Elderly Mentally Ill: Collected Articles from H&CP, examines all aspects of delivering mental health services to the elderly. Subjects range from providing outreach programs to prescribing psycho-

tropic drugs to helping families cope with Alzheimer's disease.

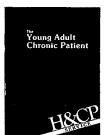
Patients' Rights



The first publication of its kind, Rights of the Mentally Disabled: Statements and Standards brings together major rights issues as established by courts, legislatures, and national organizations. Includes bibliography and listings

of advocacy projects and patient groups.

Young Adult Chronic Patients



The Young Adult Chronic Patient is a useful resource document for professionals charged with planning and providing services for a rapidly expanding popula-

tion of young adult chronic patients.

Four booklets from the Service

you are an H&CP Service member, you've already received your free copy of *Management of Tardive Dyskinesia*, our newest publication designed to help clinicians cope with patients who suffer from this serious movement disorder.

All H&CP Service publications are chosen to serve as practical resources for all professionals involved in the delivery of mental health care. And because the booklets are so popular, we offer them for sale to non-members as well.

The H&CP Service works hard for its members. It publishes booklets, operates a job placement service, maintains an audio-visual library, circulates an audio-visual catalog, locates qualified speakers for special occasions, and much more.

Let the H&CP Service work for you. Simply check the box in the coupon, and we'll send you a free brochure. Or call Sandra Hass at (202) 682-6173 for details.

S7NCG1 Mail to: H&CP Service, American Psychiatric Association, 1400 K Street, N.W., Washington, D.C. 20005 YES! Rush my order as indicated below. \$7.50 per copy. \$5.00 per copy for orders of five or more. No. Copies ___ Management of Tardive Dyskinesia The Elderly Mentally Ill _ Rights of the Mentally Disabled: Statements and Standards _ The Young Adult Chronic Patient ☐ My check or money order is enclosed (payable to the American Psychiatric Association). ☐ Please bill me. (For orders over \$35 only.) ☐ ALSO, please send me a FREE BROCHURE on membership in the H&CP Service. Name Address ___ City_ State/Zip ___ Telephone (__



Serving mental health facilities for over 35 years



PSYCHIATRIST INPATIENT UNIT

Consider a career with the Veterans Administration. Avoid start-up and overhead costs, malpractice insurance, heavy on-call responsibilities and irregular hours.

The Psychiatry Service at the Veterans Administration Medical Center, Hampton, Virginia is recruiting a psychiatrist (Board Certified preferred) to join its staff of 9 full-time physicians. This position is in the 86-bed general psychiatry unit.

Our 450-bed Medical Center is affiliated with the Medical College of Hampton Roads, providing opportunity for academic appointment and participation in training programs for residents and medical students. The starting salary ranges from the mid-50's to the upper-60's depending on experience. Bonuses of up to 18,000 are payable for full time employment, board certification, and VA tenure. VA physicians receive 30 days vacation, 15 days sick leave, CME time, and other ger crous benefits, including federal malpractice protection. Licensure in any state is acceptable. Hampton is in the center of Virginia's historic and beautiful Tidewater Area, where one can enjoy the stimulation and cultural advantages of urban life along with some of the sunbelt's most oustanding recreational opportunities. Address incuiries to Joseph P. San Clement Jr., M.D., Chief, Psychiatry Service, VA Medical Center, Hampton, Virginia 23667 (804) 722-9961, ext. 126.

VA IS AN EQUAL OPPORTUNITY EMPLOYER

STAFF PSYCHIATRISTS: BOSTON

The Boston Psychiatric Group, P.C., has available staff psychiatrist positions in metropolitan Boston.

These fulltime positions offer the chance to participate in an exciting mix of public sector and academic psychiatry. Opportunity to be part of a growing group practice with ownership of stock available. A non profit, low overhead research institute is affiliated with the practice to accept grants for physicians. Eligible physicians will receive academic appointment.

Excellent compensation package includes fringe benefits tailored to individual needs.

Minority and Spanish-speaking physicians especially sought.

Send C.V. in confidence to: Richard C. Pillard, M.D. Boston Psychiatric Group, P.C. 85 E. Newton St. Boston, MA 02118

Adolescent & Adult Psychiatrist

Adolescent Psychiatrist and Adult Psychiatrist needed to join the expanding 18 member Marshfield Clinic Psychiatry Department currently comprised of one Adolescent and five Adult Psychiatrists, six Clinical Psychologists and six Psychiatric Social Workers. Marshfield Clinic has 250 medical specialists and staffs an adjacent 524 bed acute care teaching hospital that includes a 41 bed Psychiatry Unit. Psychiatrists divide time between outpatient and Hospital practice. Attractive salary plus extensive fringe benefits. Send curriculum vitae plus the names of several references to:

Mr. John P. Folz Director, Patient Services

1000 North Oak Ave Marshfield. WI 54449



MarshfieldClinic

DIRECTOR PSYCHOSOCIAL ONCOLOGY UNIT

The Cancer Center at the University of Rochester School of Medicine and Dentistry is seeking an M.D. or Ph.D. with experimental and/or clinical research experience in the psychosocial aspects of medicine to direct an interdisciplinary research/teaching/patient care program in psychosocial oncology. With a joint appointment in the Department of Psychiatry, responsibilities would include independent and collaborative research in the Cancer Center, medical student teaching, supervision of post-doctoral fellows in Oncology and Psychiatry, and psychosocial consultations. Rank and salary are dependent upon qualifications.

Direct inquiries to Dr. Robert Ader, Search Committee Chair, Department of Psychiatry, University of Rochester Medical Center, Rochester, NY 14642.

The University of Rochester is an equal opportunity employer.

PSYCHIATRIST

Southern Minnesota position available in a private practice setting with support from a progressive health care corporation. Referrals would include, private practice, chemical dependency, mental health centers and county agencies. In-patient Psych Unit development and Medical Director opportunity also possible. Base salary negotiable up to \$85,000 annually, revenue incentive also available. Board certified preferred.

Forward resume and financial consideration to:

Duanne Rasmusson
Director of Personnel
Naeve Health Care Association
404 Fountain Street
Albert Lea, MN 56007

DIRECTOR OF PSYCHIATRIC SERVICES

Emerson Hospital, in historic Concord, Massachusetts, is located only 20 miles from Boston. We are a 221-bed community acute care hospital with 31-bed inpatient voluntary acute care unit serving a broad spectrum of psychiatric needs in a wide service area.

This is an established unit with an active medical staff and a variety of community referral sources. Our unit completely dedicated to inpatient psychiatric service is located in the hospital's new wing.

The Director should be willing to explore new organizational structures to address current and future clinical needs. The current level of organization includes a full professional staff, including an Assistant Director of Psychiatric Services.

We are looking for board certified candidates who have experience in psychiatric administration and understand the practice of psychiatry in a community hospital setting. Candidates should be creative in their approach to the further development and growth of our services, within the hospital and in relation to the community. Emerson Hospital offers a competitive salary and benefits package.

Send curriculum vitae in complete confidence to:

Paul A. Reising, Jr., M.D. Chairman, Search Committee Emerson Hospital Old Road to Nine Acre Corner Concord, MA 01742





THE EIGHTH BETTY FORD CENTER CONFERENCE ON ALCOHOLISM/CHEMICAL DEPENDENCY

"Integrating Concerns in Chemical Dependency"

FEBRUARY 15-17, 1988

The conference this year will continue to deal with the issues of alcohol/chemical dependency. Experts will gather to discuss current research direction, professional development and serving different populations. The participant has the opportunity to become involved in all phases of discussion, exchange of information and interaction in workshops designed specifically for administrators, nurses, counselors, medical directors, and other professionals.

FACULTY

John N. Chappel, M.D. • Mrs. Betty Ford Edith Gomberg, Ph.D. • Donald W. Goodwin, M.D. Martha A. Morrison, M.D. • John T. Schwarzlose, M.S., FACATA James W. West, M.D. • Joseph Westermeyer, M.D., Ph.D.

For Information/Registration
Annenberg Center for Health Sciences at Eisenhower

Annenderg Center for Health Sciences at Eisenhower 39000 Bob Hope Drive, Rancho Mirage, CA 92270-3298 800-321-3690 (National) • 800-621-7322 (California)

DIRECTOR OF PSYCHIATRY

Board certified Psychiatrist to direct program development of newly expanded department in a Central New Jersey acute-care medical center dedicated to highly regarded "model" treatment services. Responsibility for Administration and Clinical Management of Psychiatry Department and its programs. Leadership and management skills are a must for this exciting and challenging opportunity. A minimum of five (5) years clinical experience including private and community-based practice is required. Rapidly growing area within one hour to ocean, mountains, New York City and Philadelphia. Competitive salary and benefits package.

Address all confidential inquiries and curculum vitae directly to:

> Ronald E. Cohn, M.D. Medical Director



Helene Fuld MEDICAL CENTER 750 Brunswick Avenue Trenton, NJ 08683

Equal Opportunity Employer

STAFF PSYCHIATRIST

Full time position available immediately in major regional hospital with teaching facilities. Seeking BC/BE psychiatrist to join dynamic staff in its Mental Health Center. Comprehensive mental health services include a 31-bed Inpatient Unit, 12 bed Child Psychiatry Unit, OP, Pain Program, Sleep Center, 24-hour Crisis Service and projected Family Therapy program. Selected candidate will join a medical staff of 300 physicians representing all specialties. Located in Erie, PA, equidistant from Pittsburgh, Cleveland and Buffalo. Excellent salary, fringes.

Call or send C.V. to Ms. P. Rybak, Director Physician Practice Development, 232 West 25th St., Erie, PA 16544; (814) 452-5248.

DANA POSTDOCTORAL FELLOWSHIPS IN NEUROSCIENCE AT STANFORD UNIVERSITY

The Charles A. Dana Foundation has established a program for training clinician-investigators in the neurosciences at Stanford University. The purpose of the Dana Fellowship Program is to provide opportunities for trainees in neurology, neurosurgery or psychiatry, who are committed to academic careers in these specialties, to obtain research experience in basic neuroscience during their residency and/or in the immediate post-residency years. Dana Fellows may work with any member of the Neuroscience Program faculty at Stanford. A wide range of research opportunities are available in behaviorial, integrative, cellular, and molecular neuroscience. Fellowships provide two years of support including a stipend of \$33,000 per year.

Applicants should send a curriculum vitae, publication list, three letters of reference, together with a statement of potential research interests and faculty sponsors to David A. Prince, M.D., Dana Fellowship Program, Department of Neurology, Stanford University School of Medicine, Stanford, CA 94305-5235. Additional information including a list of Stanford Neuroscience faculty involved in the Dana Fellowship Program and their research interests can be obtained by writing to the above address.

Applications for fellowships beginning 7/1/88 should be received by 12/31/87.

GERIOPSYCHIATRIST

Mercy Catholic Medical Center (MCMC) seek: a Board-certified Psychiatrist with formal training and/or experience in geriatrics/gerontology.MCI/IC operates 720 acute beds in two hospitals in the Philadelphia area and has extensive inpatient and outpatient services in Mental Health.This position

involves provision of care in a multi-disciplinary geriatric assessment program, coordination and provision of care for elderly patients in acute psychiatric inpatient units, and participation in medical education programs at MCMC as part of its major affiliation with the Dept. of Psychiatry of the University of Pennsylvania.

The Geriopsychiatrist would assume a leadership role in program development for inpatient geriatric units, long-term care setting and specialty services. This position reports to MCMC's Chairman of Psychiatry and must be able to work effectively with other healthcare professionals in a multi-disciplinary setting. Academic appointment in the Dept. of Psychiatry of the University of Pennsylvania is available and encouraged for this position.

Please forward resume to: Joseph Malonoski, Vice President, Human Resources

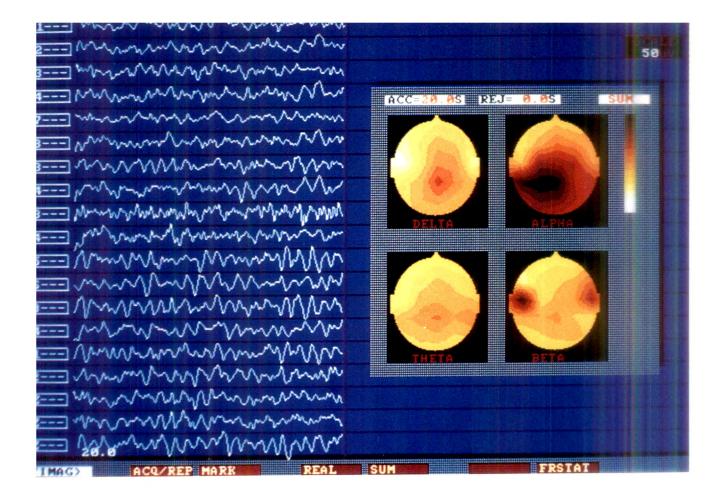
Mercy Catholic Medical Center Lansdowne Avenue & Baily Road Darby, PA 19023

MCMC is an equal opportunity employer



THE BRITISH JOURNAL OF PSYCHIATRY

OCTOBER 1987 VOLUME 151	
eview Article	
The nature of mental disorder in Africa today: some clinical observations. G.A.	435 440
pers	
	447
*	455
, , , , , , , , , , , , , , , , , , , ,	459
ne dopamine hypothesis survives, but there must be another way ahead. T.J. row	460
there more dementia, depression and neurosis in New York? A comparative udy of the elderly in New York and London using the computer diagnosis GECAT. J.R.M. Copeland, B.J. Gurland, M.E. Dewey, M.J. Kelleher, A.M.R. nith and I.A. Davidson	466
etention of 'psychopathic disorder' patients in special hospitals: critical issues. T. Grounds	474
ne dismantling of the mental hospital? Glenside Hospital surveys 1960–1985. M. ord, C. Goddard and R. Lansdall-Welfare	479
ne extent and nature of depressive phenomena in primary health care: a study in alcutta, India. B. Sen and P. Williams	486
ychological intervention in civilian flying phobia: evaluation and a three-year llow-up. C.P. Walder, J.S. McCracken, M. Herbert, P.T. James and N. Brewitt	494
* · · · · · · · · · · · · · · · · · · ·	499
	5 06
elective decreases in MAO-B activity in post-mortem brains from schizophrenic atients with type II syndrome. F. Owen, T.J. Crow, C.D. Frith, J.A. Johnson, E.C. hnstone, R. Lofthouse, D.G.C. Owens and M. Poulter	514
comparison of scales for assessing rehabilitation patients. R.G. McCreadie, J.W. fleck, Y. McKenzie and A.D.T. Robinson	520
stent, timing and persistence of emotional disorders following childbirth. P.N. ott	523
nxiety management for persistent generalised anxiety. G. Butler, A. Cullington,	528 535
	543
rief Reports	
-	546
	548
ncephalitis lethargica, a contemporary cause of catatonic stupor: a report of two ses. J. Johnson and P.A. Lucey	550
case of affective psychosis following bereavement in a mentally handicapped oman. I.J. McLoughlin and M.S. Bhate	552
• • •	554
eurosyphilis—a treatable psychosis. D. Brooke, P. Jamie, R. Slack, M. Sulaiman and P. Tyrer	556



The logical way to look into the brain is through our window.

It all depends on how you look at it, of course. But when we set out to develop a superior neurodiagnostic system, we thought isn't it more logical to ask clinicians first what their needs were? That's when our engineers got to work and designed the QSI 9000. For you. We invite you to look at the

result of 7 years of development and clinical testing.

The QSI 9000 is the ultimate electrophysiologic diagnostic system in one versatile unit. With unparalleled computer power. And full 20 channel EEG and Evoked Potential capability.

QSI 9000 has been designed to look out for the future too, with maximum adaptability to advances in computer technology.

Now you can provide comprehensive EEG exams, Evoked Potential studies and the latest in Topographical Mapping without the high cost of acquiring and operating multiple diagnostic units. The QSI 9000 puts it all together. With a result that we think might surprise you. It costs less.

One look, you'll see QSI 9000's color images are faster, easier to interpret. And the system is IBM compatible so you can take advantage of the wide range of existing statistical programs.

Putting it all together, the QSI 9000 makes sense. That's why we call it the Electrophysio-Logical answer to today's neurodiagnostic needs. For more information call 1-800-387-0209.





The Electrophysio-Logical System.

Desyrel (trazodone HCl) DIVIDOSE 150mg tablets



50 MILLIGRAMS (one-third of a tablet)



150 MILLIGRAMS (the entire tablet)

- Easy to titrate
- Convenient
 4-in-1 tablet
- Economical



75 MILLIGRAMS (one-half of a tablet)



100 MILLIGRAMS

Mead Johnson Pharmaceuticals
1987 Bristol-Myers U.S. Pharmaceutical and Nutritional Group • Evansville, Indiana 47721 U.S.A.

THE AMERICAN JOURNAL OF PSYCHIATRY

Volume 144, Number 12

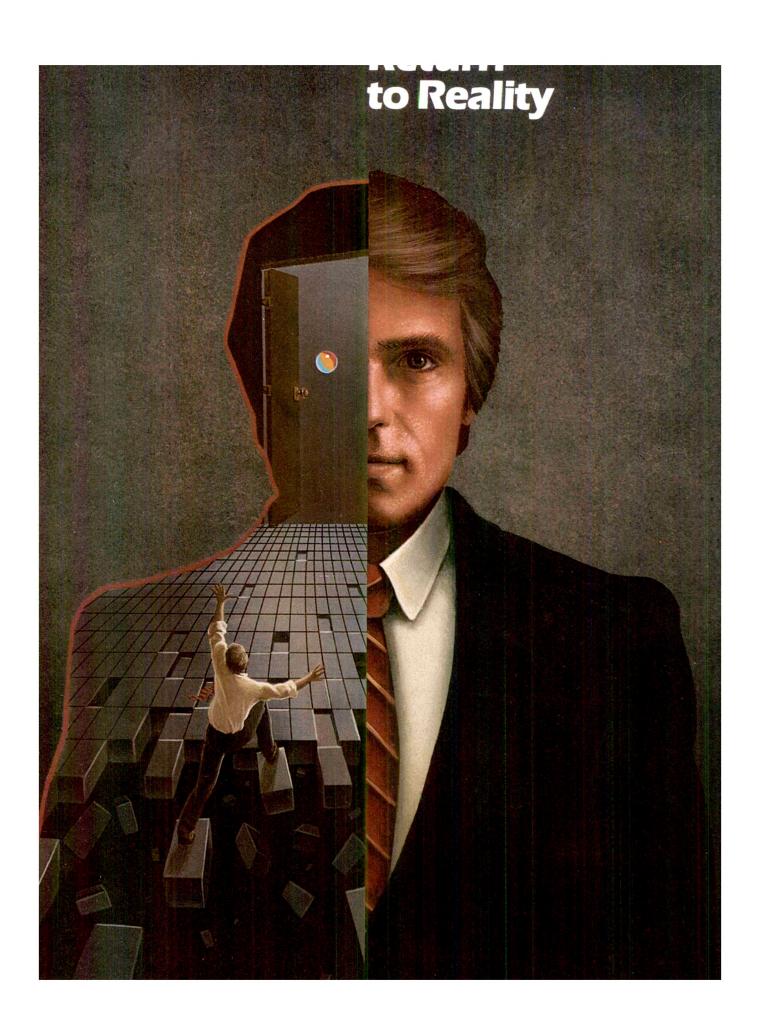
December 1987

In this issue:

Elements of the Private Therapeutic Interview
By Norman E. Zinberg

A Critical Discussion of *DSM-III* Dysthymic Disorder By James H. Kocsis and Allen J. Frances

Official Journal of the American Psychiatric Association



Stelazine

trifluoperazine HCl Tablets: 1, 2, 5 and 10 mg Concentrate: 10 mg/ml

Be sure you're the doctor... always write Stelazine® Dispense as written.

> Ace 6.4.88

Helps Put the Chronic Schizophrenic Back in Touch

Effectively	controls	psychotic	target s	ymptoms

- ☐ Apparently activates withdrawn, apathetic or detached patients
- ☐ Seldom causes excessive sedation
- ☐ Demonstrates a low risk of anticholinergic effects and hypotension
- ☐ Offers a convenient, economical b.i.d. dosage

'Stelazine' shares the increased risk of extrapyramidal symptoms associated with all high-potency neuroleptics. However, when encountered, these symptoms are generally readily controlled.

Stelazine®

brand of trifluoperazine hydrochloride

Before prescribing, see complete prescribing information in SK&F Co. literature or <u>PDR</u>. The following is a brief summary Contraindications: Comatose or greatly depressed states due to C.N.S. depressants, blood dyscrasias; bone marrow depression; liver damage.

liver damage.

Warnings: Tardive dyskinesia (TD) may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively brief treatment at low doses. There is no known treatment for TD, although it may remit in neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative. illness trial responds to neuroleptics and for which affertable, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. If signs and symptoms of TD appear, discontinuation of neuroleptics should be considered. [See PRECAUTIONS.]

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex, has been reported in association with antipsychotic drugs. Clinical manifestation sinclude: Hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability.

The management of NMS should include 1) immediate discontinua-tion of antipsychotic drugs and other drugs not essential to concur-rent therapy. 2) intensive symptomatic treatment and medical monitoring, and 3) treatment, if available, of any concomitant serious medical problems.

'Stelazine' Concentrate contains sodium bisulfite, which may cause stelazine. Concernate contains solution issuinite, which may cau allergic-type reactions including anaphylactic symptoms or asthmatic episodes in certain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and probably low and is seen more frequently in asthmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive [e.g., have had blood dyscrasias, jaundice] to any phenothiazine. Caution patients about activities requiring alertness [e.g., operating vehicles or machinery], especially during the first few days' therapy, Additive depressant effect is possible with other C.N.S. depressants, including alcohol. Do not use in pregnancy except when essential and

potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuro-leptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is contemplated.

when chronic use is contemplated.

Use cautiously in angina. Avoid high doses and parenteral use when cardiovascular system is impaired since hypotension has occurred. Antiemetic effect may mask the signs of overdosage of other drugs or obscure diagnosis and treatment of certain physical disorders. Prolonged use of high doses may result in cumulative effects with severe C.N.S. or vasomotor symptoms. If retinal changes occur, discontinue drug. Agranulocytosis, thrombocytopenia, pancytopenia, anemia, cholestatic jaundice, liver damage have been reported. Use cautiously in patients with dalaroma. glaucoma.

glaucoma.

Patients with a history of long-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent in vitro, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

cautiously in persons who will be exposed to extreme heat. Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenergic blockade. Concomitant use of phenothiazines with propranolol increases plasma levels of both drugs. Concurrent use of phenothiazines may counteract antihypertensive effects of guanethidine and related compounds. Thiazide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytoin toxicity; dosage adjustments of anticonrulsants may be necessary. If neuronuscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive 'Stelazine' 48 hours before or 24 hours after myelography with the contrast medium metrizamide. The presence of phenothiazines may produce false positive phenylketonuria (PKU) test results.

Adverse Reactions: Drowsiness, dizziness, skin reactions, rash, dry mouth, insomnia, amenorrhea, fatigue, muscular weakness, anorexia, lactation, blurred vision. Neuromuscular [extrapyramidal] reactions: motor restlessness, dystonias, pseudo-parkinsonism, tadive dyskinesia, and a variant, tardive dystonia.

Other adverse reactions reported with Stelazine [trifluoper-azine HCI, SK&F] or other phenothlazines: Some adverse effects are more frequent or intense in specific disorders [e.g., mitral insufficiency or phenochromocytoma].

effects are more frequent or intense in specific disorders [e.g., mitral insufficiency or pheochromocytoma].

Grand mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities; altered cerebrospinal fluid proteins; cerebral edema; prolongation and intensification of the action of C.N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, consistipation, obstipation, adynamic ileus, ejaculatory disorders/impotence, priapism, atonic colon, urinary retention, miosis and mydriasis; reactivation of psychotic processes, catatonic-like states, hypotension (sometimes fatal); cardiac arrest; leukopenia, eosinophilia, pancytopenia, agranulocytosis, thrombocytopenia, eosinophilia, pancytopenia, agranulocytosis, thrombocytopenia punpura, hemolytic anemia, aplastic anemia, jaundice, biliary stasis, hyperglycemia, hypoglycemia, glycosuria, menstrual irregularities, galactorrhea, gynecomastia, false positive pregnancy tests, photosensitivity, itching, erythema, urticaria, eczema up to exfoliative dermatitis, asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions, penipheral edema; reversed epinephrine effect; hyperpyrexia; mild fever after large I.M. doses; increased appetite; increased weight; a systemic lupus erythematosus-like syndrome; pigmentary retinopathy; with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits; neuroleptic malignant syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible O and T wave distortions—have been observed. Temporary nausea, vomiting, dizziness, and tremulousness may follow abrupt cessation of high-dose therapy. NOTE: Sudden death in patients taking phenothiazines (Lapparently due to cardiac arrest or asphyxia due to failure of cough reflex) has been reported.

Supplied: Tables: I mg., 2 mg., 5 mg. and 10 mg. in bottles of 100 and 1000; in Single Unit Packaces of 100 (Intended for institut

Supplied: Tablets, 1 mg., 2 mg., 5 mg, and 10 mg., in bottles of 100 and 1000; in Single Unit Packages of 100 (intended for institutional use only); Injection, 2 mg./mL.; and Concentrate, 10 mg./mL.

SK&F CO. Cidra, P.R. 00639 ©SK&F Co., 1987

If you are going to be successful in topographic brain mapping, you need more than promises.

e want to explain why our responsible approach to topographic brain mapping is critical to your success.

Anyone can make claims. We can demonstrate the system and kind of responsibility it takes to become the world leader in topographic brain mapping.

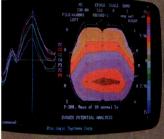
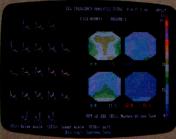
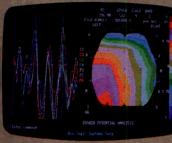


Fig. further Village Sentence Village Se





mean of 10 normal subjects

P-300 of patient with Morbus Wilson Syndrome

FFT of EEG (EC), Morbus Wilson Syndrome

P-300 of patient with Alzheimer's Disease

Responsibility

If you want to acquire topographic brain mapping data that will be clinically accepted by your colleagues, you must have a system provided by a company with a proven reputation for responsibility. We will discuss the clinical applications with you which are supported by appropriate research and are available to assist you with diagnosis and treatment. We will talk to you honestly about the ways the BRAIN ATLAS'® can assist you in monitoring psychotropic drugs and provide you valuable information in cases such as schizophrenia, dementia, depression, organic brain dysfunction and alzheimer's disease. At Bio-logic, we always remember that you are the Doctor with the responsibility for diagnosis of patients. Our responsibility is to provide quality systems which will assist you in that diagnosis.

Normative Data

Before we introduced the first Brain Atlas in April 1984, we had a program in place for the collection and screening of normative data. We will supply you with a quality normative data base which is continuously expanding in number of cases, types of tests and subgroups. Our unique program produces normative data which have been collected in multiple sites according to stringent protocols and anonymously scrutinized by an independent medical review board outside the company. We also provide you with the capability to create your own normative data base. At Bio-logic, our Normative Data Base is an open book. We will share the number of cases we have in each category and explain our data collection/data evaluation process in detail.

Ease of Use

The Brain Atlas will deliver the full power and flexibility of a computer. Powerful functions are reduced to a few keystrokes when you use the easy-to-follow menus and help screens to guide you to the level of sophistication you require in testing. Because the system is IBM PC/AT compatible, we can even incorporate commercially available programs to make your work faster and easier.

Affordable and Expandable

The Brain Atlas series offers you a complete range in price and capability with the BRAIN

ATLAS EEG MAPPER, BRAIN ATLAS I, BRAIN ATLAS II, BRAIN ATLAS III and the BRAIN ATLAS III PLUS. The BRAIN ATLAS III and the BRAIN ATLAS III PLUS are totally self contain systems and need not be interfaced to an EE machine. All the systems in the series have options available which allow you to tailor the system to fit your specific requirements and budget. Each system is designed to be upgraded as your needs change or as new capabilities are introduced.

Customer Support, Training and User Group

Bio-logic maintains and provides a complete program for unsurpassed customer support and training. Whether you are working with the customer support and applications staff members or attending our customer training cours and seminars, you will be interacting with professionals who are dedicated to your satisfaction. The unique user group which is supported by Bio-logic allows you the opportunity to exchange information with your colleagues worldwide who are dedicated to quality topographic brain mapping.

Bio-logic[®]
Systems Corp.

Corporate Headquarters

Headquarters
One Bio-logic Plaza
Mundelein, IL 60060

Call toll free at 800-323-8326 (Illinois call collect 312-949-5200) Telex: 650-1733095 MCI FAX: (312) 949-8615 Europe/Middle East

Dickenson House, Albion Street, Chipping Norton, Oxfordshire, UK 0X7 5BJ Telephone 44 608 41 981 Telex: Ref. EEG001, 265871 MONREF G FAX: 44 608 41887



THE AMERICAN JOURNAL OF PSYCHIATRY

EDITOR John C. Nemiah, M.D.

DEPUTY EDITOR Morris A. Lipton, Ph.D., M.D.

BOOK FORUM EDITOR Nancy C. Andreasen, M.D., Ph.D.

EDITORIAL STAFF

Managing Editor Melanie Miller

Assistant Managing Editor Linda A. Loy

Senior Assistant Editors Marianne K. Guerra Laura M. Little Iane Weaver

Assistant Editors Marjorie M. Henry Beverly M. Sullivan

Administrative Assistant Pamela Rich

Editorial Secretaries Donna A. Coleman Barbara J. LeMoine

Art Services John P. Halford

ASSOCIATE EDITORS

Ross J. Baldessarini, M.D. Elissa P. Benedek, M.D. Philip A. Berger, M.D. Jonathan F. Borus, M.D. Kenneth L. Davis, M.D. Lewis L. Judd, M.D. Toksoz Byram Karasu, M.D. Herbert Y. Meltzer, M.D. Judith L. Rapoport, M.D. Loren H. Roth, M.D., M.P.H. Lorraine D. Siggins, M.D. Charles E. Wells, M.D. Charles B. Wilkinson, M.D.

STATISTICAL EDITORS John J. Bartko, Ph.D. Lee Gurel, Ph.D.

FORMER EDITORS

Amariah Brigham, M.D. 1844-1849 T. Romeyn Beck, M.D. 1849-1854 John P. Gray, M.D. 1854-1886 G. Alder Blumer, M.D. 1886-1894 Richard Dewey, M.D. 1894-1897 Henry M. Hurd, M.D. 1897-1904 Edward N. Brush, M.D. 1904-1931 Clarence B. Farrar, M.D. 1931-1965

Francis J. Braceland, M.D. 1965-1978

The American Journal of Psychiatry, ISSN 0002-953X, is published monthly by the American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005. Subscriptions: U.S. \$50.00 per year, Canada and foreign \$65.00; single issues: U.S. \$7.00, Canada and foreign \$8.00.

Business communications, changes of address, and questions about subscriptions from APA members should be directed to the Division of Member Services: (202) 682-6090. Communications from nonmember subscribers should be directed to the Circulation

Department: (202) 682-6158. Authors who wish to contact the Journal editorial office should call (202) 682-6020.

Business Management: Nancy Frey, Director, Periodicals Services; Laura G. Abedi, Advertising Production Manager: (202) 682-6154;

Laura G. Abedi, Advertising Production Manager: (202) 682-6134; Beth Prester, Director, Circulation; Karen Loper, Promotion Manager; Jackie Coleman, Fulfillment Manager.

Advertising Sales: Raymond J. Purkis, 2444 Morris Avenue, Union, NJ 07083; (201) 964-3100.

Type set by Byrd PrePress, 5408 Port Royal Road, Springfield, VA 22151. Printed by Dartmouth Printing Company, 69 Lyme Road, Hanover, NH 03755.

Second-class postage paid at Washington, DC and additional

Second-class postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to Circulation Department, American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005.

Indexed in Abstracts for Social Workers, Biological Abstracts, Chemical Abstracts, Chicago Psychoanalytic Literature Index, Cumulative Index to Nursing Literature, Excerpta Medica, Hospital Literature Index, Index Medicus, International Nursing Index, Nutrition Abstracts, Psychological Abstracts, Science Citation Index, and Social Sciences Index.

The American Psychiatric Association does not hold itself responsible for statements made in its publications by contributors or advertisers. Unless so stated, material in the *Journal* does not reflect the endorsement, official attitude, or position of the A Psychiatric Association or of the Journal's Editorial Board.

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by APA for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$00.75 per copy is paid directly to CCC, 21 Congress St., Salem, MA 01970. 0002-953X/87/\$00.75.

This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. APA does not require that permission be obtained for the photocopying of isolated articles for nonprofit classroom or library reserve use; all

fees associated with such permission are waived.

Copyright © 1987 American Psychiatric Association.

THE AMERICAN JOURNAL OF PSYCHIATRY

Volume 144, Number 12 December 1987

SPECIAL ARTICLES	1527	Elements of the Private Therapeutic Interview Norman E. Zinberg
	1534	A Critical Discussion of DSM-III Dysthymic Disorder James H. Kocsis and Allen J. Frances
REGULAR ARTICLES	1543	Fluvoxamine Treatment of Obsessive-Compulsive Disorder Teri L. Perse, John H. Greist, James W. Jefferson, Rochelle Rosenfeld, and Reuven Dar
	1549	Neuroleptic Responsivity of Negative and Positive Symptoms in Schizophrenia Alan Breier, Owen M. Wolkowitz, Allen R. Doran, Alec Roy, John Boronow, Daniel W. Hommer, and David Pickar
	1556	Clinical Correlates of Platelet Prostaglandin Receptor Subsensitivity in Schizophrenia Philip D. Kanof, Michael Davidson, Celeste A. Johns, Richard C. Mohs, and Kenneth L. Davis
	1561	Prevalence of Depression and Distress in a Large Sample of Canadian Residents, Interns, and Fellows Kirby Hsu and Victor Marshall
	1567	The Psychosocial Impact of War Trauma and Torture on Southeast Asian Refugees Richard F. Mollica, Grace Wyshak, and James Lavelle
BRIEF COMMUNICATIONS	1573	Obsessive-Compulsive Symptoms in Panic Disorder Thomas A. Mellman and Thomas W. Uhde
	1577	Dysphoria Associated With Methylphenidate Infusion in Borderline Personality Disorder Peter B. Lucas, David L. Gardner, Owen M. Wolkowitz, and Rex W. Cowdry
	1580	Psychiatric Illness in the Mothers of Anxious Children Cynthia G. Last Michel Hersen, Alan E. Kazdin, Greta Francis, and Henry J. Grubb
	1584	Accelerometric Assessment of Tardive Dyskinesia Warren W. Tryon and Bennett Pologe

1588

Catherine Yeager

1592 Premenstrual Exacerbation of Binge Eating in Bulimia Madeline M. Gladis and B. Timothy Walsh

Bipolar Mood Disorder and Endometriosis: Preliminary Findings Dorothy Otnow Lewis, Florence Comite, Catherine Mallouh, Laura Zadunaisky, Karen Hutchinson-Williams, Bruce D. Cherksey, and

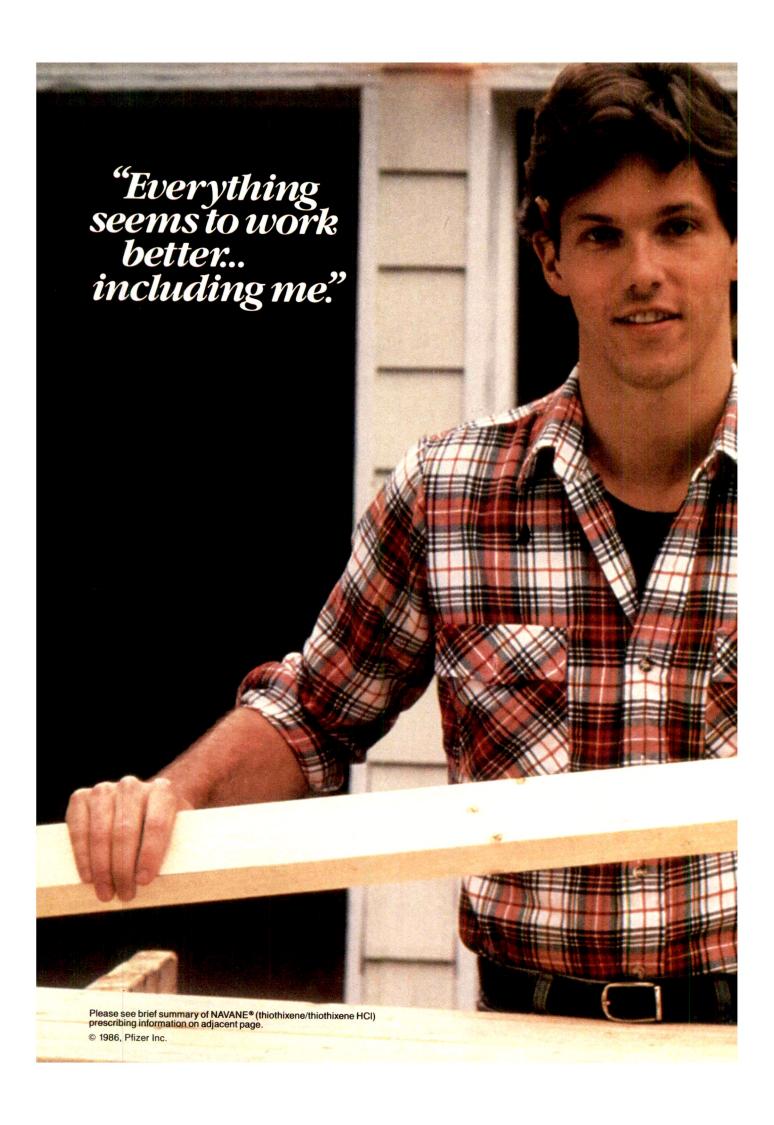
1595 An International Perspective on Assessment of Negative and Positive Symptoms in Schizophrenia Massimo Moscarelli, Cesare Maffei, Bruno Mario Cesana, Paolo Boato, Tommaso Farma, Adele Grilli, Vittorio Lingiardi, and Carlo Lorenzo Cazzullo

CLINICAL AND Childhood Experiences of Homeless Men Ezra Susser, Elmer L. Struening, and Sarah Conover RESEARCH REPORTS Seasonal Affective Disorder With Summer Depression and Winter 1602 Thomas A. Wehr, David A. Sack, and Norman E. Hypomania Rosenthal 1604 Drug and Alcohol Abuse by Bulimic Women and Their Families Cynthia M. Bulik **BOOK FORUM** 1607 LETTERS 1619 TO THE EDITOR ANNUAL INDEX 1628 Author Index 1645 Subject Index A23 Calendar OTHER A24 Books Received A30 Officers of the American Psychiatric Association Information for Contributors A37 A44 British Journal of Psychiatry Contents A50 Index to Advertisers

New Statistical Peer Review Policy

The Editor is pleased to announce the appointment of John J. Bartko, Ph.D., and Lee Gurel, Ph.D., as Statistical Editors of the American Journal of Psychiatry.

Effective September 1, 1987, manuscripts submitted to the *Journal* for consideration for publication will, at the direction of the Statistical Editors, receive peer review for statistical content *in addition to* the *Journal*'s regular peer review.





Navane

(thiothixene) (thiothixene HCI)

It feels good to feel useful again

References: 1. Bressler B, Friedel RO: A comparison between chlorpromazine and thiothixene in a Veterans Administration hospital population. *Psychosomatics* 1971;12:275-277. 2. DiMascio A, Demirgian E: Study of the activating properties of thiothixene. *Psychosomatics* 1972;13:105-108. 3. DiMascio A, Demirgian E: Study of the activating properties of thiothixene. *Psychosomatics* 1972;13:105-108. 3. DiMascio A, Demirgian E: Jaraning in the rehabilitation of the chronic schizophrenic. Presented as a Scientific Exhibit at The American Psychiatric Association. Washington, DC, May 3-6, 1971. 4. Goldstein B, Weiner D, Banas F: Clinical evaluation of thiothixene in chronic ambulatory schizophrenic patients, in Lehmann HE, Ban TA (eds): *The Thioxanthenes: Modern Problems of Pharmacopsychiatry*. Basel, Switzerland, S. Karger, 1969, vol 2, pp. 45-52. 5. Dillenkofter RL, Gallant DM, George RB, et al: Electrocardiographic evaluation of schizophrenic patients: A double-blind comparison. Presented as a Scientific Exhibit at The 125th Annual Meeting of the American Psychiatric Association, Dallas, May 1-4, 1972. 6. Data available on request from Roerig.



BRIEF SUMMARY OF PRESCRIBING INFORMATION
Navane* (thiothixene) Capsules: 1 mg, 2 mg, 5 mg, 10 mg, 20 mg
(thiothixene hydrochloride) Concentrate: 5 mg/ml, Intramuscular: 2 mg/ml, 5 mg/ml
Indications: Navane is effective in the management of manifestations of psychotic disorders. Navane has
not been evaluated in the management of behavioral complications in patients with mental retardation.
Contraindications: Contraindicated in patients with circulatory collapse, comatose states, central nervous
system depression due to any cause, and blood dyscrasias. Contraindicated in individuals who have shown
hypersensitivity to the drug. It is not known whether there is a cross-sensitivity between the thioxanthenes
and the phenothiazine derivatives, but the possibility should be considered.
Warnings: Tardive Dyskinesia—Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs.
Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women,
it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which
patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to
cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed
to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to
the patient increase. However, the syndrome can develop, although much less commonly, after relatively
brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome mav

brief treatment periods at low doses. There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, riself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness that, 1) is known to respond to neuroleptic drugs, and, 2) for whom alternative, equally effective, but potentially less harmful treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically.

a satisfactory children response should be sought. The need for communed treatment should be reassessed periodically.

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

(For further information about the description of tardive dyskinesia and its clinical detection, please refer to Information for Patients in the Precautions section, and to the Adverse Reactions section.)

Neuroleptic Maignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Maignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Maignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Maignant Syndrome (NMS)—A potentially fatal symptom complex sometimes referred to as Neuroleptic Maignant Syndrome (NMS)—A potentially fatal syndrome is complicated. In arriving at a diagnosis, citical mainfestations of NMS are hyperpyrexia, muscle rigidity, latered mental status and evidence of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis, and cardiac dysrhythimas). The diagnostic evaluation of patients with this syndrome is complicated. In arriving at a diagnosis, it is important to identify cases where the clinical presentation includes both serious medical liness (e.g., pneumonia, systemic infection, etc.) and untreated or inadequately treated extrapyramidal signs and symptoms (EPS). Other important considerations in the differential diagnosis include central anticolingreci toxicity, heat stroke, drug fever and primary central nervous system (CNS) pathology.

The management of NMS should include 1) immediate discontinuation of antipsychotic drugs and other drugs not essential to concurrent therapy, 2) intensive symptomatic treatment and medical monitoring, and 3) treatment of any concomitant serious medical problems for which specific reatments are available. There is no general agreement about specific pharmacological treatment regimens for uncomplicated NMS. If a p

actions of the parbiturates, the dosage of the anticonvulsant therapy should not be reduced when Navane is administered concurrently.

Caution as well as careful adjustment of the dosage is indicated when Navane is used in conjunction with other CNS depressants other than anticonvulsant drugs.

Though exhibiting rather weak anticholinergic properties, Navane should be used with caution in patients who are known or suspected to have glaucoma, or who might be exposed to extreme heat, or who are receiving atropine or related drugs.

Use with caution in patients with cardiovascular disease.

Also careful observation should be made for progression, retinance the and lepticular signmentation (fine

Also, careful observation should be made for pigmentary retinopathy, and lenticular pigmentation (fine lenticular pigmentation has been noted in a small number of patients treated with Navane for prolonged







periods). Blood dyscrasias (agranulocytosis, pancytopenia, thrombocytopenic purpura), and liver damage (jauudice, biliary stasis) have been reported with related drugs.

Undue exposure to sunlight should be avoided. Photosensitive reactions have been reported in patients on Navane (thiothixene).

Intramuscular Administration—As with all intramuscular preparations, Navane Intramuscular should be injected well within the body of a relatively large muscle. The preferred sites are the upper outer quadran of the buttock (i.e. gluteus maximus) and the mid-lateral thigh.

The deltoid area should be used only if well developed, such asin certain adults and older children, and then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into the lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiration is necessary to help avoid inadvertent injection into a blood vessel.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tisse culture experiments indicate that approximately one third of human breast cancers are prolactin-dependen in viro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Information for Patients—Given the likelihood that some patients exposed chronically to neuroleptics will develop tardive dyskinesia, it is advised that all patients in whom chronic u

Violusy take into account the clinical circumstances and the competency of the patient to understand the information provided.

Adverse Reactions: Note: Not all of the following adverse reactions have been reported with Navane (thiothixene). However, since Navane has certain chemical and pharmacologic similarities to the phenothiazines, all of the known side effects and toxicity associated with phenothiazine therapy should be borne in mind when Navane is used.

Cardiovascular effects: Tachycardia, hypotension, lightheadedness, and syncope. In the event hypotension occurs, epinephrine should not be used as a pressor agent since a paradoxical further lowering of blood pressure may result. Nonspecific EKG changes have been observed in some patients receiving Navane (thiothixene). These changes are usually reversible and frequently disappear on continued Navane therapy. The incidence of these changes is other than that observed with some phenothiazines. The clinical significance of these changes is not known.

CNS effects: Drowsiness, usually mild, may occur although it usually subsides with continuation of Navane therapy. The incidence of sedation appears similar to that offthe piperazine group of phenothiazines, but less than that of certain aliphatic phenothiazines. Restlessness, agitation and insomnia have been noted with Navane. Seizures and paradoxical exacerbation of psychotic symptoms have occurred with Navane.

infrequently.
Hyperreflexia has been reported in infants delivered from mothers having received structurally relate

drugs.
In addition, phenothiazine derivatives have been associated with cerebral edema and cerebrospinal fluid

In addition, phenothiazine derivatives have been associated with cerebral edema and cerebrospinal fluid abnormalities.

Extrapyramidal symptoms, such as pseudo-parkinsonism, akathisia, and dystonia have been reported. Management of these extrapyramidal symptoms depends upon the type and severity. Rapid relief of acute symptoms may require the use of an injectable antiparkinson agent. More slowly emerging symptoms may be managed by reducing the dosage of Navane and/or administering an oral antiparkinson agent. Persistent fardive Dyskinesia: As with all antipsychotic agents tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy has been discontinued. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw (e.g., protrusion of tongue, putfing of cheeks, puckering of mouth, chewing movements). Sometimes these may be accompanied by involuntary movements of extremities.

Since early detection of tardive dyskinesia is important, patients should be monitored on an ongoing basis. It has been reported that fine vermicular movement of the tongue may be an early sign of the syndrome. If this or any other presentation of the syndrome is observed, the clinician should consider possible discortinuation of neuroleptic medication. (See Warnings section.)

Hepatic Effects: Elevations of serum transaminase and alkaline phosphatase, usually transient, hav 3 been infrequently observed in some patients. No clinically confirmed cases of jaundice attributable to Navane have been reported.

Hematologic Effects: As is true with certain other psychotropic drugs, leukopenia and pancytopenia. Allergic Reactions: Rash, pruritus, urticaria, photosensitivity and rare cases of anaphylaxis have been reported with Navane. Undue exposure to sunlight should be avoided. Although not experienced with Navane, cytoliative dermatitis and contact dermatitis (in nursing personnel) have been reported with certain phenothiazines.

Endocrine Disorders: Lactation, modera

phenothiazines.
Endocrine Disorders: Lactation, moderate breast enlargement and amenorrhea have occurred in a small percentage of females receiving Navane. If persistent, this may necessitate a reduction in dosage or the discontinuation of therapy. Phenothiazines have been associated with false positive pregnancy tests. gynecomastia, hypoglycemia, hyperplycemia, and glycosuria.
Autonomic Effects: Dry mouth, blurred vision, nasal congestion, constipation, increased sweating, increased salivation, and impotence have occurred infrequently with Navane therapy. Phenothiazines have been associated with miosis, mydriasis, and adynamic ileus.
Other Adverse Reactions: Hyperpyrexia, anorexia, nausea, vomiting, diarrhea, increase in appetite and weight, weakness or fatigue, polydipsia and peripheral edema.
Although not reported with Navane, evidence indicates there is a relationship between phenothiazine therapy and the occurrence of a systemic lupus erythematosus-like-syndrome.

**Neuroleptic Malignant Syndrome (NMS): Please refer to the text regarding NMS in the WARNINGS section.

section.

NOTE: Sudden deaths have occasionally been reported in patients who have received certain phenothiazine derivatives. In some cases the cause of death was apparently cardiac arrest or asphyxia due to failure of the cough reflex. In others, the cause could not be determined nor could it be established that death was due to phenothiazine administration.

Dosage: Dosage of Navane should be individually adjusted depending on the chronicity and severity of the condition. See full prescribing information.

Overdosage: For information on signs and symptoms, and treatment of overdosage, see full prescribing information.



A division of Pfizer Pharmaceuticals New York, New York 10017

The Answer May Be On The Tip Of Your Tongue

CORTITESTIM

Affice Salivar Depression Test

Is in despession or at medical disorder? PDLA's CORTITESTTM can believe wou make the description in action.

The Desagned as one Suppression Test (DST) is a widely applied laboratory determining the pression and objective predictor of the atment response. The test requires at least two posted with edition of the atment response and analysis. PDLA's CORTINEST Welling the need to draw blood samples.

- Sawe time and money
- Convenient sample collection
- Significant result interpretation
- Excellent correlation
- Children or adolescents
- Difficult patients

For additional information, please return the coupon below or telephones



FICONICE PROPERTION Stimusal references regarding measuring adjuisok in salima.

Please send me addition	onal information and PDLA's C	ORTITEST™ kit.
Name		
	Hospital	
Address		
City	State	Zip
	Diagnostic Laboratories of America Court, South Plainfield, New	

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Required by 39 U.S.C. 3685)

- 1. Date of filing: September 28, 1987.
- 2. Title of publication: THE AMERICAN JOURNAL OF PSYCHIATRY.
- 3. Frequency of issue; monthly. A. No. of issues published annually -12. B. Annual subscription price -\$50.00
- 4. Location of known office of publication: 1400 K St., N.W., Washington, D.C. 20005.
- 5. Location of the headquarters or general business offices of the publishers: 1400 K St., N.W., Washington, D.C. 20005.
- 6. Names and addresses of publisher, editor, and managing editor: American Psychiatric Association, address 1400 K St., N.W., Washington, D.C. 20005; Editor: John C. Nemiah, M.D., above address; Managing Editor: Melanie Miller, above address.
- 7. Owner (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given:) American Psychiatric Association, 1400 K St., N.W., Washington, D.C. 20005.
- 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities (If there are none, so state): None.
- 9. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, PSM). The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during the preceding 12 months.
- 10. Extent and nature of circulation: Average no. copies each issue during preceding 12 months: A. Total no. copies printed (net press run): 46,298; B. Paid circulation: 1. Sales through dealers and carriers, street vendors and counter sales: none; 2. Mail subscriptions: 44,548; C. Total paid circulation (Sum of 10B1 and 10B2): 44,548; D. Free distribution by mail, carrier or other means samples, complimentary, and other free copies: 325; E. Total distribution (Sum of C and D): 44,873; F. Copies not distributed 1. Office use, leftover, unaccounted, spoiled after printing: 1,425; 2. Returns from News Agents: none; G. Total (Sum of E, F1 and F2 should equal net press run shown in A): 46,298.

Actual number of copies of single issue published nearest to filing date: A. Total no. copies printed (net press run): 46,643; B. Paid circulation: 1. Sales through dealers and carriers, street vendors and counter sales: none; 2. Mail subscriptions: 45,413; C. Total paid circulation (Sum of 10B1 and 10B2): 45,413; D. Free distribution by mail, carrier or other means — samples, complimentary, and other free copies: 329; E. Total distribution (Sum of C and D): 45,742; F. Copies not distributed — 1. Office use, left-over, unaccounted, spoiled and after printing: 901; 2. Returns from News Agents: none; G. Total (Sum of E, F1 and F2 — should equal net press run shown in A): 46,643.

11. I certify that the statements made by me above are corrected and complete.

BETH PRESTER.

ETH PRESTER, Circulation Director

...

- 12. For completion by publishers mailing at the regular rates (Section 132.121, Postal Service Manual).
- 39 U. S. C. 3626 provides in pertinent part: "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates."

In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the phased postage rates presently authorized by 39 U. S. C. 3626.

(Signature and title of editor, publisher, business manager, or owner)

BETH PRESTER

Circulation Director

WORLD PSYCHIATRIC ASSOCIATION REGIONAL SYMPOSIUM

Hosted by the American Psychiatric Association

October 13-16, 1988 Washington, D.C.

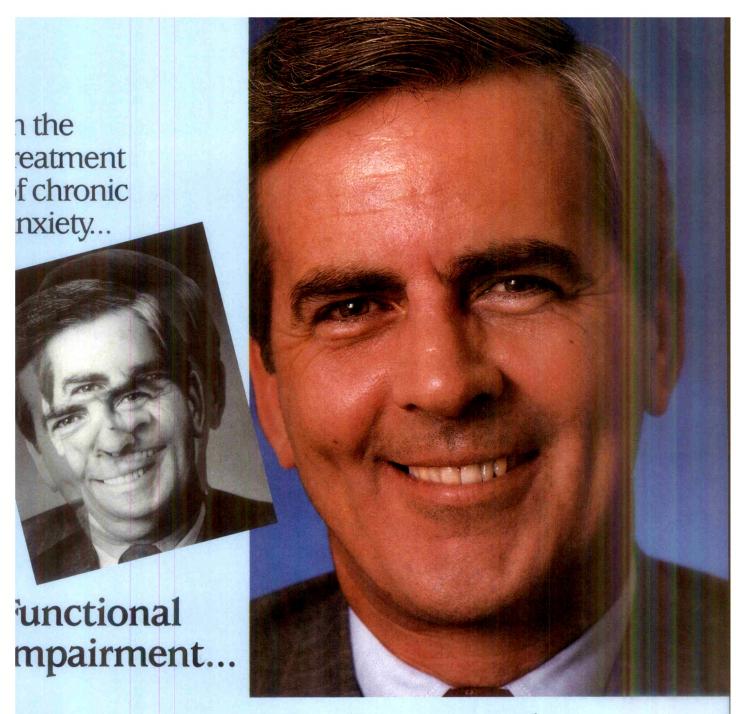
The Research and Clinical Interface for Psychiatric Disorders

Continuing Medical Education Credits will be offered.

SCIENTIFIC AND ORGANIZING COMMITTEE:

Robert E. Hales, M.D., Chair Allen J. Frances, M.D. D. Ray Freebury, M.D. John Morihisa, M.D. Betty Pfefferbaum, M.D. Melvin Sabshin, M.D. Henry H. Work, M.D.

For further information, contact: Ellen Mercer, Office of International Affairs, American Psychiatric Association, 1400 K St., N.W., Washington, D.C. 20005 U.S.A. Phone: 202-682-6286

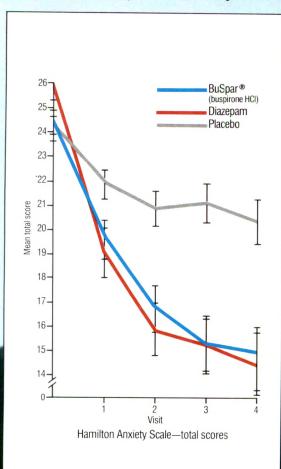


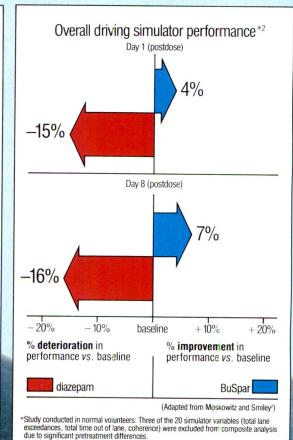
It doesn't have to be the price of efficacy.

Buspar (buspirone HCl)

The anxiolytic that breaks the link between efficacy and psychomotor impairment

Proven anxiolytic efficacy¹ ...without impairment of motor skills²





The first choice for chronic anxiety

BuSpar effectively relieves the symptoms of anxiety—such as inappropriate anger, inability to concentrate, and excessive worry or fearfulness—without producing significant sedation³ or euphoria.⁴

BuSpar helps restore normal functioning without impairing cognition⁵ or motor function² or potentiating the effects of alcohol.⁶

No withdrawal syndrome⁷ has been reported with BuSpar, even on abrupt discontinuation of therapy, and no evidence of drug dependence has been observed. As a result, you stay in control of the treatment you prescribed.

Counseling and follow-up are important. Patients should be advised that BuSpar does not produce a tranquilizer "buzz," but instead will relieve their symptoms gradually and steadily. Improvement generally is noted within 7 to 10 days. Patients should be monitored for relief of symptoms, improvement in functioning, and an increased capacity to cope.

BuSpar is not a controlled substance. The most common side effects noted in controlled clinical trials were dizzinesss (12%), nausea (8%), headache (6%), nervousness (5%), lightheadedness (3%), and excitement (2%).

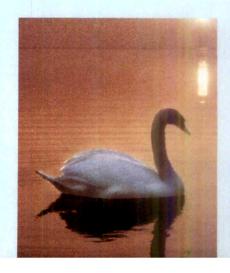
Note: Patients should be cautioned about operating an automobile or using complex machinery until they are reasonably certain that BuSpar treatment does not affect them adversely.

While formal studies of the interaction of BuSpar with alcohol indicate that it does not increase alcohol-induced impairment in motor and mental performance, it is prudent to avoid concomitant use of alcohol and BuSpar.

Effective, nonimpairing, nonaddictive

Buspirone HCl)

A different kind of calm



For Brief Summary, please see following page.

DAOPAL (DUSPILOTETICI)

References: 1. Rickels K, et al: Buspirone and diazepam in anxiety. A controlled study *J Clin Psychiatry* 1982, 43(12. Sec. 2). 81-86. 2. Moskowitz H and Smiley A: Effects of chronically administered buspirone and diazepam on driving-related skills performance. *J Clin Psychiatry* 1982, 43(12. Sec. 2). 45-55. 3. Newton RE, et al: A review of the side effect profile of buspirone, *Am J Med* 1986, 80(38) 17-21. 4. Cole JO. et al: Assessment of the abuse flability of buspirone in recreational sedative users. *J Clin Psychiatry* 1982, (12. Sec. 2).69-74. 5. Lucki, et al: Differential effects of the anxiolytic drugs, diazepam and buspirone, on memory function. *Br J Clin Pharmacol* 1987, 23:207-211. 6. Matila MJ, et al: Acute effects of buspirone and alcohol on psychomotor skills. *J Clin Psychiatry* 1982, (12. Sec. 2).56-60. 7. Data on file, Mead Johnson Pharmaceuticals.

Contraindications: Hypersensitivity to buspirone.

Warnings: The administration of BuSpar to a patient taking a monoamine oxidase inhibitor (MAOI) may pose a hazard. Since blood pressure has become elevated when BuSpar was administered concomitantly with an MAOI, such concomitant use is not recommended. BuSpar should not be employed in lieu of appropriate antipsychotic treatment.

Precautions: General—interference with cognitive and motor performance: Although buspirone is less sedating than other anxiotytics and does not produce significant functional impairment, its CNS effects in a given patient may not be predictable; therefore, patients should be cautioned about operating an automobile of using complex machines are represented to extract the threating and automobile of the product of t

given patient may not be predictable; therefore, patients should be cautioned about operating an automobile or using complex machinery until they are reasonably certain that buspirone does not affect them adversely. Although buspirone has not been shown to increase alcohol-induced impairment in motor and mental performance, it is prudent to avoid concomitant use with alcohol. Potential for withdrawal reactions in sedative/hypnotic/anxiolytic drug dependent patients. Because buspirone will not block the withdrawal syndrome often seen with cessation of therapy with benzodiazepines and other common sedative/hypnotic drugs, before starting buspirone withdraw patients gradually from their prior treatment, especially those who used a CNS depressant chronically. Rebound or withdrawal symptoms may occur over varying time periods, depending in part on the type of drug and its elimination half-life. The withdrawal syndrome can appear as any combination of irritability, anxiety, agitation, insomnia, tremor, abdominal cramps, muscle cramps, vomiting, sweating, flu-like symptoms without lever, and occasionally, even as seizures. even as seizures

even as setzures. Possible concerns related to buspirone's binding to dopamine receptors: Because buspirone can bind to central dopamine receptors, a question has been raised about its potential to cause acute and chronic changes in dopamine mediated neurological function (e.g., dystonia, pseudoparkinsonism, akathisia, and tardive dyskinesia). Clinical experience in controlled trials has failed to identify any significant neuroleptic-like activity; however, a syndrome of restlessness, appearing shortly after initiation of treatment, has been reported; the syndrome may be due to increased central noradrenergic activity or may be attributable to dopaminergic effects (in represent akthisia)

like activity, however, a syndrome of restlessness, appearing shortly after initiation of treatment, has been reported; the syndrome may be due to increased central noradrenergic activity or may be attributable to dopaminergic effects (ie, represent akathista).

Information for Patients—Patients should be instructed to inform their physician about any medications, prescription or non-prescription, alcohol or drugs they are now taking or plan to take during treatment with buspirone; to inform their physician if they are pregnant, are planning to become pregnant, or become pregnant while taking buspirone; to inform their physician if they are pregnant, are planning to become pregnant, or become pregnant while taking buspirone; to inform their physician if they are breast feeding; and not to drive a car or operate potentially dangerous machinery until they experience how this medication affects them.

Drug Interactions—Concomitant use with other CNS active drugs should be approached with caution (see **Warnings*).**Concomitant use with trazodone may have caused 3- to 6-fold elevations on SGPT (ALT) in a few patients. Buspirone does not displace tightly bound drugs like phenyloin, propranolol, and wartarin from serum proteins, but may displace less firmly bound drugs like digoxin.

Carcinogenesis, **Mutagenesis**, **Impairment of Fertility**—No evidence of carcinogenic potential was observed in rats or mice; buspirone did not induce point mutations, nor was DNA damage observed; chromosomal aberrations or abnormalities did not occur.

Pregnancy: **Teratogenic Effects***—Pregnancy Category B: Should be used during pregnancy only if clearly needed.

Nursing Mothers—Administration to nursing women should be avoided if clinically possible.

Pediatric Use—The safety and effectiveness have not been determined in individuals below 18 years of age.

Use in Patients with Impaired Hepatic or Renal Function—Since buspirone is metabolized by the liver and excreted by the kidneys, it is not recommende

included: central nervous system disturbances (3.4%), primarily dizziness, insomnia, nervousness, drows-iness, light-headed feeling; gastrointestinal disturbances (1.2%), primarily nausea; miscellaneous distur-bances (1.1%), primarily headache and fatigue. In addition, 3.4% of patients had multiple complaints, none of which could be characterized as primary

of which could be-characterized as primary. Incidence in Controlled Clinical Trials—Adverse events reported by 1% or more of 477 patients who received buspirone in four-week, controlled trials: Cardiovascular: Tachycardia/palpitations 1%. CNS: Dizziness 12%, drowsiness 10%, nervousness 5%, insomnia 3%, light-headedness 3%, decreased concentration 2%, excitement 2%, anger/hostility 2%, confusion 2%, depression 2%. EENT: Blurred vision 2%, castrointestinal: Nausea 8%, dry mouth 3%, abdominal/gastric distress 2%, diarrhea 2%, containion 1%, vomitting 1%. Musculoskeletal: Musculoskeletal aches/pains 1%. Neurological: Numbness 2%, paresthesia 1%, incoordination 1%, tremor 1%. Skin: Skin rash 1%. Miscellaneous: Headache 6%, tatigue 4%, weakness 2%, sweating/clamminess 1%.

ness 2 %, sweating craminitiess 7%.

Other Events Observed During the Entire Pre-marketing Evaluation—The relative frequency of all other undesirable events reasonably associated with the use of buspirone in approximately 3000 subjects who took multiple doses of the drug under well-controlled, open, and uncontrolled conditions is defined as follows: Frequent are those occurring in at least 1/100 patients; infrequent are those occurring in 1/100 to tollows: Frequent are those occurring in at least 1700 patients; infrequent are those occurring in 1700 to 17000 patients; and rare are those occurring in less than 171000 patients. Cardiovascular—frequent: non-specific chest pain; infrequent: syncope, hypotension, hypertension; rare: cerebrovascular accident, congestive heart failure, myocardial infarction, cardiomyopathy, bradycardia. Central Nervous System—frequent: dream disturbances; infrequent: depensonalization, dysphoria, noise intolerance, euphoria, akalhisia, lear-fulness, loss of inferest, disassociative reaction, hallucinations, suicidal ideation, seizures; rare: leelings of claustrophobia, cold intolerance, stupor, sturred speech, psychosis. EENT—frequent: tinnitus, sore throat, nasal congestion; infrequent: redness and itching of the eyes, altered taste, altered smell, conjunctivitis; rare: claustrophobia, cold intolerance, stupor, sturred speech, psychosis. EENI—Irequent: tinnitus, sore throat, nasal congestion, infrequent redness and liching of the eyes, altered taste, altered smell, conjunctivitis, rare: inner ear abnormality, eye pain, photophobia, pressure on eyes. Endocrine—rare: galactorrhea, thyroid abnormality Gastrointestinal—infrequent: flatlence, anorexia, increased appetite, salivation, irritable colon, rectal bleeding; rare: burning of the tongue. Genitourinary—infrequent: urinary frequency, urinary hesitancy, menstrual irregularity and spotting, dysuria; rare: amenorrhea, pelvic inflammatory disease, enuresis, noctaria. Musculoskeletal—infrequent: muscle cramps, muscle spasms, rigid/stiff muscles, arthralgias. Neurological—infrequent: involuntary movements, slowed reaction time; rare: muscle weakness. Respiratory—infrequent: hyperventilation, shortness of breath, chest congestion; rare: epistaxis. Sexual Function—infrequent: decreased or increased libido; rare: delayed ejaculation, impotence. Skim—infrequent: edema, pruritus, flushing, easy bruising, hair loss, dry skin, facial edema, blisters; rare: acne, thinning of nails. Clinical Laboratory—infrequent: increases in hepatic aminotransferases (ScOT, ScPT); rare: eosinophilia, leventomobocytopenia. Miscellaneous—infrequent: weight gain, fever, roaring sensation the head, weight loss, malaise; rare: alcohol abuse, bleeding disturbance, loss of voice, hiccoughs.

Drug Abuse and Dependence: Controlled Substance Class—Not a controlled substance.

Physical and Psychological Dependence—Buspirone has shown no potential for abuse or diversion and there is no evidence that it causes tolerance, or either physical or psychological dependence. However, since it is difficult to predict from experiments the extent to which a CNS active drug will be misused, diverted, and/or abused once marketed, physicians should carefully evaluate patients for a history of drug abuse and follow such patients closely, observing them for signs of buspirone misuse

Recommended Overdose Treatment—General symptomatic and supportive measures should be used along with immediate gastric lavage. No specific antidote is known and dialyzability of buspirone has not been determined.

For complete details, see Prescribing Information or consult your Mead Johnson Pharmaceuticals Repre-

Mead DITION PHARMACEUTICALS
Rristof-Mivers U.S. Pharmaceutical and Nutritional Group • Evansville, Indiana 47721 U.S.A. MJL 7-4207R

MOVING?

PLEASE NOTIFY US 6 WEEKS IN ADVANCE

MEMBERS: This notification will change your address (and/or name) for the AMERICAN JOURNAL OF PSYCHIATRY. PSYCHIATRIC NEWS, and all memberwide APA mailings.

SUBSCRIBERS: Please notify each publication separately.

FORMER ADDRESS:

PASTE LABEL HERE

1	VFW	ADE	RESS	and/	or N	IAM	F

147 41712		
DEPARTMENT		
ORGANIZATION		
STREET		
CITY	STATE	7ID

PHONE #

NAME

APA MEMBERS MAIL TO:

Office of Membership Services AMERICAN PSYCHIATRIC ASSOCIATION 1400 K Street, N.W. Washington, D.C. 20005

SUBSCRIBERS MAIL TO:

APA Circulation Department, AMERICAN PSYCHIATRIC ASSOCIATION 1400 K Street, N.W. Washington, D.C. 20005

This Person Makes the Nicolet BEAM System Exceptional!



Why? Because she meets the rigorous criteria for inclusion in one of the BEAM age-appropriate data base groups. These benchmark groups contain only certifiably healthy individuals. Every man, woman and child was carefully screened and examined under standardized protocols and environmental conditions. No other topographic mapping system has a data base as comprehensive, exact and healthy as the Nicolet BEAM System.

What's more, the speed and ease of use of the BEAM system make this data base truly clinically useful. All

analyses, including Significance Probability Mapping (SPM), are accomplished virtually instantaneously.

In addition, the Nicolet BEAM system is cost-effective. A variety of financial arrangements, including leasing, are available.

Find out how the Nicolet BEAM System is revolutionizing the fields of neurology and psychiatry. For more product information or to schedule a demonstration, call TOLL FREE 1-800-356-0007 in the continental U.S.A. In Wisconsin call collect.

® Nicolet Instrument Corporation

Nicolet Biomedical Instruments

Electrophysiology
Yesterday, Today, Tomorrou

AMERICAN PSYCHIATRIC

ASSOCIATION



Simplify your search for the right job or job candic professional resources of APA's Psychiatric Placeme for you.

If you are a psychiatrist seeking a new challenge, or a more lucrative salary, the Psychiatric Placemer you in touch with suitable employers. For a modest plete confidence, you can list your professional que your personal preferences with the PPS for one year

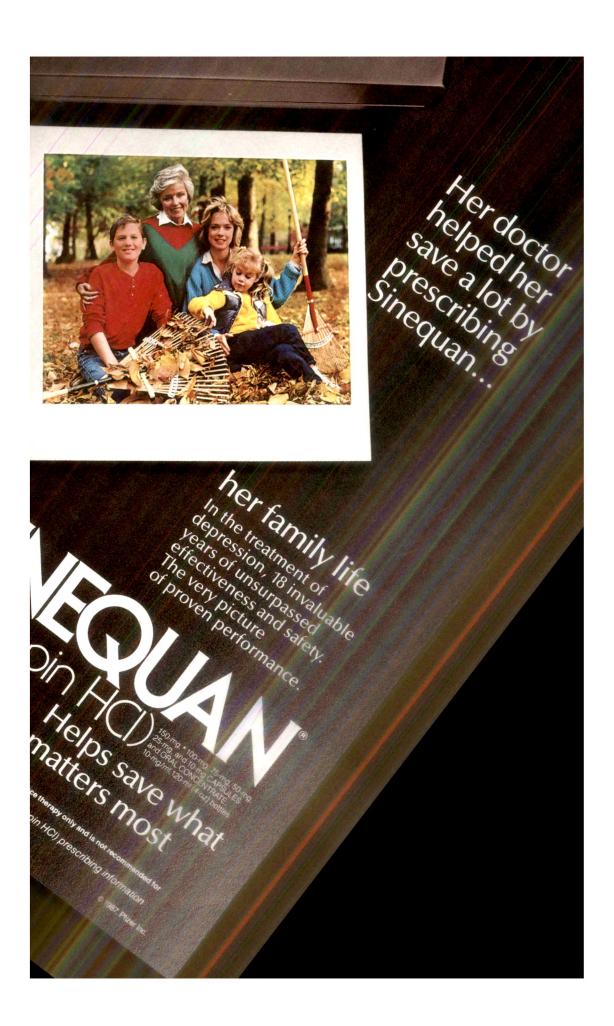
As an employer, you will benefit from the experier recruiters who will carefully explore every aspect of match your requirements against a comprehensive candidates. Unlike other search firms, the PPS puts a the wide resources of APA—all for a fraction of the appect.

In its first year, the Psychiatric Placement Service surfroduced many qualified candidates to prospective year, we'd like to introduce you to your next employ Call Maureen Corrigan at (202) 682-6108 or mail thi

Please send r Service.	ne more informo	ation about the Psychic
□ Poter	itial Applicant	□ Potential Employ
Name (please	e print)	
Address		
City	State	Zip
Phone		
Mail to Maure ment Service,	en Corrigan, Pla APA, 1400 K Stre	acement Coordinator, eet, N.W., Washington,

Psychiatric Placement Service

Fully staffed and operated by the Hospital & Community Psychiatry Service of the American Psychiatric Association



BRIFF SUMMARY

- SINEDUAN* (doxepin HCI) Capsules/Oral Concentrate
 Indications. SINEOUAN is recommended for the treatment of:

 1. Psychoneurotic patients with depression and/or anxiety.

 2. Depression and/or anxiety associated with alcoholism (not to be taken concomitantly with
- 3. Depression and/or anxiety associated with organic disease (the possibility of drug interaction

3. Depression and/or anxiety associated with organic disease (the possibility of drug interaction should be considered if the patient is receiving other drugs concomitantly).
4. Psychotic depressive disorders with associated anxiety including involutional depression and manic-depressive disorders.
The target symptoms of psychoneurosis that respond particularly well to SINEQUAN include anxiety, tension, depression, somatic symptoms and concerns, sleep disturbances, guilt, lack of energy, fear, apprehension and worry.
Clinical experience has shown that SINEQUAN is safe and well tolerated even in the elderly patient.
Deviate the programment of the pediatric pnoulation. SINEQUAN is not recommended to:

Clinical experience has shown that SINEQUAN is safe and well tolerated even in the elderiy patient. Owing to lack of clinical experience in the pediatric population, SINEQUAN is not recommended for use in children under 12 years of age.

Contraindications. SINEQUAN is contraindicated in individuals who have shown hypersensitivity to the drug. Possibility of cross sensitivity with other dibenzoxepines should be kept in mind. SINEQUAN is contraindicated in patients with glaucoma or a tendency to urinary retention. These disorders should be ruled out, particularly in older patients.

Warnings. The once-a-day dosage regimen of SINEQUAN in patients with intercurrent illness or patients taking other medications should be carefully adjusted. This is especially important in patients receiving other medications with anticholinergic effects.

patients taking other medications should be carefully adjusted. This is especially important in patients receiving other medications with anticholinergic effects.

Usage in Geriatrics: The use of SINEQUAN on a once-a-day dosage regimen in geriatric patients should be adjusted carefully based on the patient's condition.

Usage in Preparancy: Reproduction studies have been performed in rats, rabbits, monkeys and dogs and there was no evidence of harm to the animal fetus. The relevance to humans is not known. Since there is no experience in pregnant women who have received this drug, safety in pregnancy has not been established. There are no data with respect to the secretion of the drug in human milk and its effect on the nursing infant.

the nursing infant.

Usage in Children:* The use of SINEQUAN in children under 12 years of age is not recommended.

Usage in Children: The use of SINEQUAN in children under 12 years of age is not recommended because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors: Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN. The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Usage with Alcohol: It should be borne in mind that alcohol ingestion may increase the danger inherent in any intentional or unintentional SINEQUAN overdosage. This is especially important in nations are considered.

inherent in any intentional or unintentional SINEQUAN overdosage. This is especially important in patients who may use alcohol excessively.

Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking the drug.

Patients should also be cautioned that their response to alcohol may be potentiated.

Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy.
Prescriptions should be written for the smallest feasible amount.

Should increased symptoms of psychosis or shift to manic symptomatology occur, it may be necessary to reduce dosage or add a major tranquilizer to the dosage regimen.

Adverse Reactions. MOTE: Some of the adverse reactions noted below have not been specifically reported with SINEQUAN use. However, due to the close pharmacological similarities among the tricyclics, the reactions should be considered when prescribing SINEQUAN.

Anticholinergic Effects: Dry mouth, blurred vision, constipation, and urinary retention have been reported. If they do not subside with continued therapy, or become severe, it may be necessary to reduce the dosage.

Central Nervous System Effects: Drowsiness is the most commonly noticed side effect. This tends to disappear as therapy is continued. Other infrequently reported CNS side effects are confusion, disorientation, hallucinations, numbness, paresthesias, ataxia, and extrapyramidal symptoms and seizures. tation, hallucinations, numbness, paresthesias, ataxia, and extrapyramidal symptoms and seizures. Cardiovascular: Cardiovascular effects including hypotension and tachycardia have been reported

Cardiovascular: Cardiovascular effects including hypotension and tachycardia have been reported occasionally. Allergic: Skin rash, edema, photosensitization, and pruritus have occasionally occurred. Hematologic: Eosinophilia has been reported in a few patients. There have been occasional reports of bone marrow depression manifesting as agranulocytosis, leukopenia, thrombocytopenia, and purpura. Gastrointestinal: Nausea, vomiting, indigestion, taste disturbances, diarrhea, anorexia, and aphthous stomathis have been reported. (See anticholinergic effects.) Endocrine: Raised or lowered libido, testicular swelling, gynecomastia in males, enlargement of breasts and galactorrhea in the female, raising or lowering of blood sugar levels, and syndrome of inappropriate antiduretic hormone have been reported with tricyclic administration. Other: Dizziness, tinnitus, weight gain, sweating, chills, fatigue, weakness, flushing, jaundice, alopecia, and headache have been occasionally observed as adverse effects. Withdrawal Symptoms: The possibility of development of withdrawal symptoms upon abrupt cessation of treatment after prolonged SINEQUAN (doxepin HCI) administration should be borne in mind. These are not indicative of addiction and gradual withdrawal of medication should not cause these symptoms.

Dosage and Administration. For most patients with illness of mild to moderate severity, a starting daily

Dosage and Administration. For most patients with iliness of mild to moderate severity, a starting daily dose of 75 mg is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg/day to 150 mg/day. In more severely ill patients higher doses may be required with subsequent gradual increase to 300 mg/day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg/day. In patients with very mild symptomatology or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg/day. The total daily dosage of SINEQUAN may be given on a divided or once-a-day dosage schedule. If the once-a-day schedule is employed the maximum recommended dose is 150 mg/day. This dose may be given at bedtime. The 150 mg capsule strength is intended for maintenance therapy only and is not recommended for initiation of treatment.

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not be evident for two to three weeks.

Overdosage
A. Signs and Symptoms
I. Mild: Drowsiness, stupor, blurred vision, excessive dryness of mouth.
2. Severe: Respiratory depression, hypotension, coma, convulsions, cardiac arrhythmias and tachycardias.

Also: urinary retention (bladder atony), decreased gastrointestinal motility (paralytic ileus), hyperthermia (or hypothermia), hypertension, dilated pupils, hyperactive reflexes B. Management and Treatment

B. Management and Treatment

1. Mild. Observation and supportive therapy is all that is usually necessary.

2. Severe: Medical management of severe SINEQUAN overdosage consists of aggressive supportive therapy. If the patient is conscious, gastric lavage, with appropriate precautions to prevent pulmonary aspiration, should be performed even though SINEQUAN is rapidly absorbed. The use of activated charcoal has been recommended, as has been continuous gastric lavage with saline for 24 hours or more. An adequate airway should be established in comatose patients and assisted ventilation used if necessary. EKG monitoring may be required for several days, since relapse after apparent recovery has been reported that many of the cardiovascular and CNS symptoms of fricyclic antidepressant poisoning in adults may be reversed by the slow intravenous administration of 1 mg to 3 mg of physostigmine salicylate. Because physostigmine is rapidly metabolized, the dosage should be repeated as required. Convulsions may respond to standard anticonvulsant therapy, however, barbiturates may potentiate any respiratory depression. Dialysis and forced diuresis generally are not of value in the management of overdosage due to high tissue and protein binding of SINEQUAN.

More detailed professional information available on request



Preserve your copies of The American Journal of Psychiatry

ustom-made for the **Journal**, these slip-Cases turn back issues into a permanent reference source. Bound in attractive green leatherette, and embossed with gold lettering, each slipcase holds one year (12 issues) of

> The American Journal of Psychiatry. And s with gold llowing you lize your ther. These ace-saving affordable

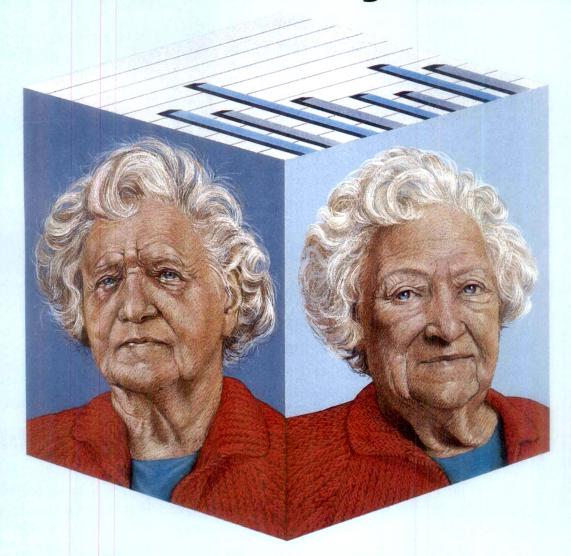
95 each, three for .95, six for \$39.95. dd \$1.00 per unit for postage and handling. (Outside U.S. add \$2.50 per unit. U.S. currency only.) PA residents add 6% sales tax.

	ATT THE PARTY	
10		each come
		transfers, a
	THE AMERICAN	to personal
	JOURNAL OF	volume fur
	PSIGIL	
		durable, spa
		cases make
		I was a second and a second
		gifts as well
		O
Marie Control	101.	\$7.9
		\$21.
15.653		
是基础以来 多		Ac
Diameter 1985 Vol. 142, No. 1 November 1985 Vol. 142, No. 1		URNAL OF PSYCHIATRY ORNAL OF PSYCHIATRY
Sheader 1985 Vol. 142, No. 1	10 THE AMERICAN KI	RNAL OF PSYCHIATRY RNAL OF PSYCHIATRY
\$ Secure 1991 No. 141, No.	THE AMERICAN RAT	RNAL OF PSYCHIATRY
I PARTY AND DESCRIPTION OF THE PROPERTY OF THE PARTY OF T		RNAL OF PSYCHIATRY
April 1982 Wid 142.1	Se CHIT-128 THE AMERICAN PO	CIENAL OF PSYCHIATRY
4 Norsaly 1965 Vol. 142.5	THE AMERICAN TO	TRNAL OF INCUINTRY

Mail to: The American	1 Journal of Psychiatry
Jesse Jones Indu	
Dept. AJP	
499 East Erie Av	venue
Philadelphia, PA	19134
Please send me	
	or money order for \$
☐ Charge my	
0 /	* The state of the
	MasterCard
	Diners Club
(\$15 minimum charge	e order)
	Exp. Date
	1
O	
TOLL FREE CHARGE	ORDERS: 1-800-972-5858
Name	
Name	(please print)
Address	
Address	(no P.O. boxes please)
City/State/Zip	
Satisfaction guaranteed.	
. 3	

New Data on Low-Dose Trifluoperazine:

Reduced Symptoms in 86% of **Disturbed Elderly Patients**



Stelazine

trifluoperazine HCI Tablets: 1, 2, 5 and 10 mg. Concentrate: 10 mg./mL.

Before prescribing, please see adjacent page for a brief summary of prescribing information.

Before prescribing, see complete prescribing information in SK&F Co. literature or <u>PDR</u>. The following is a brief summary.

Contraindications: Comatose or greatly depressed states due to C. N. S. depressants, blood dyscrasias; bone marrow depression; liver damage.

depressants, blood dyscrasias; bone marrow depression; liver damage.

Warnings: Tardive dyskinesia (TD) may develop in patients treated with neuroleptic (antipsychotic) drugs. The risk of TD and likelihood of irreversibility are thought to increase as duration of treatment and total cumulative neuroleptic dose increase. Much less commonly, the syndrome can develop after relatively brief treatment at low doses. There is no known treatment for TD, although it may remit if neuroleptics are withdrawn. Neuroleptic treatment may suppress signs and symptoms of the syndrome and thereby mask the underlying disease process. To minimize risk of TD, generally reserve chronic neuroleptic treatment for patients who suffer from chronic illness that responds to neuroleptics and for whom alternative, effective, less harmful treatments are not available or appropriate. In patients requiring chronic treatments. responds to neuroleptics and not whom alternative, effective, less harming chronic treatments are not available or appropriate. In patients requiring chronic treatment, the minimal effective dose and shortest duration of treatment should be sought. Periodically reassess need for continued treatment. If signs and symptoms of TD appear, discontinuation of neuroleptics should be considered. [See PRECAUTIONS.]

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex has been reported in association with antipsychotic drugs. Clinical manifestations include: Hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability.

evidence of automomic instability.

The management of NMS should include 1) immediate discontinuation of anti-psychotic drugs and other drugs not essential to concurrent therapy, 2) inten-sive symptomatic treatment and medical monitoring, and 3) treatment, if available, of any concomitant serious medical problems.

'Stelazine' Concentrate contains sodium bisulfite, which may cause allergi type reactions including anaphylactic symptoms or asthmatic episodes in cer-tain susceptible people. The prevalence of sulfite sensitivity in the general population is unknown and probably low and is seen more frequently in asthmatic than in non-asthmatic people.

astnmatic than in non-asthmatic people.

Generally avoid using in patients hypersensitive [e.g., have had blood dyscrasias, jaundice] to any phenothiazine. Caution patients about activities requiring alertness [e.g., operating vehicles or machinery], especially during the first few days' therapy. Additive depressant effect is possible with other C. N.S. depressants including alcohol. Do not use in pregnancy except when essential and potential benefits clearly outweigh possible hazards. Prolonged jaundice, extrapyramidal signs, hyperreflexia and hyporeflexia have been reported in newborns whose mothers received phenothiazines. There is evidence that phenothiazines are excreted in the breast milk of nursing mothers.

Precautions: Since some patients chronically exposed to neuroleptics will develop tardive dyskinesia, it is advised that, if possible, full information about this risk be given to patients or their guardians when chronic use is

Contemplated.

Use cautiously in angina. Avoid high doses and parenteral use when cardio-vascular system is impaired since hypotension has occurred. Antiemetic effect may mask the signs of overdosage of other drugs or obscure diagnosis and treatment of certain physical disorders. Prolonged use of high doses may result in cumulative effects with severe C. N.S. or vasomotor symptoms. If retinal changes occur, discortinue drug, Agranulocytosis, thrombocytopenia, pancytopenia, anemia, cholustatic jaundice, liver damage have been reported. Use cautiously in patients with glaucoma.

reported. Use cautiously in patients with glaucoma. Patients with a history of long-term therapy with 'Stelazine' and/or other neuroleptics should be evaluated periodically for possible dosage adjustment or discontinuance of drug therapy. Neuroleptic drugs cause elevated prolactin levels that persist during chronic use. Since approximately one-third of human breast cancers are prolactin-dependent in vitro, this elevation is of potential importance if neuroleptic drug use is contemplated in a patient with a previously detected breast cancer. However, clinical and epidemiologic studies to date have not shown an association between the chronic use of neuroleptic drugs and mammary tumorigenesis. Use cautiously in persons who will be exposed to extreme heat.

to extreme heat.

Phenothiazines may diminish the effect of oral anticoagulants. Phenothiazines can produce alpha-adrenergic blockade. Concomitant use of phenothiazines with propranolol increases plasma levels of both drugs. Concurrent use of phenothiazines may counteract antihypertensive effects of guanethidine and related compounds. This acide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines. Phenothiazines may lower the convulsive threshold and may also precipitate phenytion toxicity, dosage adjustments of anticonvulsiants may be necessary if neuromuscular reactions occur in pregnant women, or in children, permanently stop neuroleptic therapy. Patients should not receive. Stelazine: 48 hours before or 24 hours after myelography with the contrast medium metrizamde. The presence of phenothiazines may produce false positive phenyliketonuria (PKU) test results.

Adverse Reactions: Drowsiness, dizziness, skin reactions, rash, dry mouth, insomnia, amenorrhea, fatigue, muscular vexakness, anorexia, lactation, blurred vision. Neuromuscular (extrapyramidal) reactions: motor resitiessness, dystonias, pseudo-parkinsonism, tardive dyskinesia, and a variant, tardive dystonia.

Other adverse reactions reported with Stelazine [trifluoperazine HCI,

Other adverse reactions reported with Stelazine (trifluoperazine HCI, SK&F) or other phenothiazines: Some adverse effects are more frequent or intense in specific disorders (e.g., mitral insufficiency or pheochromocytoma).

for and mal and petit mal convulsions, particularly in the presence, or with history, of EEG abnormalities, altered cerebrospinal fluid proteins; cerebral edema; prolongation and intensification of the action of C. N.S. depressants, atropine, heat, and organophosphorus insecticides; nasal congestion, headache, nausea, constipation, obstipation, adynamic ileus, ejaculatory disorders/impotence, priapism, atonic colon, urinary retention, miosis and providings reactivation of nosybotic processes, catarioric like states hyporieductie: Natusea, Consupation, Oustiplauni, adynamic tiess, Sepculariory disorders/impotence, priapism, atonic colon, urinary retention, miosis and mydnasis, reactivation of psychotic processes, catatonic-like states, hypotension (sometimes fatal); cardiac arrest, leukopenia, eosinophilia, pancytopenia, agranuliocytosis, thrombocytopenic purpura, hemolytic anemia, aplastic anemia, jaundice, biliary stasis, hyperglycemia, hypoglycemia, glycosuna, menstrual irregulanties, galactorrhea, gynecomastia, false positive pregnancy tests, photosensitivity, itching, erythema, urticana, eczema up to exfoliative dermatitis, asthma, laryngeal edema, angioneurotic edema, anaphylactori deractions, peripheral edema; reversed epinephrine effect, hyperpyrevia, mild fever after large LM, doses, increased appetite; increased weight; a systemic lupus erythematousus-like syndrome; pimentary retinopathy, with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits; neuroleptic malignant syndrome, which may be fatal; EKG changes—particularly nonspecific, usually reversible O and T wave distortions—have been observed. Temporary nausea, vomiting, dizziness, and tremulousness may follow abrupt cessation of high-dose therapy. NOTE: Sudden death in patients taking phenothiazines (apparently due to cardiac arrest or asphyxia due to failure of cough reflex) has been reported.

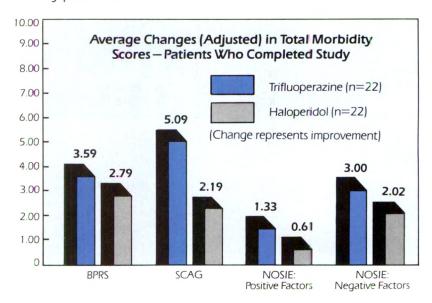
SK&F CO. Manufactured and distribute SK&F Co., Cidra, P.R. 00639

BRS-57:161

©SK&F Co., 1987

New Low-Dose Study

A six-week, double-blind study compared the safety and efficacy of trifluoperazine with haloperidol in the management of psychotic symptoms in disturbed elderly patients.



The compounds used in this study were haloperidol, USP, and trifluoperazine hydrochloride, SK&F, prepared in #2 opaque capsules. Data on file, Medical Department, Smith Kline & French Laboratories. Available on request.

Conclusions:

- Comparable efficacy in reducing symptoms of psychoses associated with chronic brain syndromes and senile psychosis in elderly patients
- Comparable type and incidence of adverse reactions
- No extrapyramidal symptoms (EPS) developed in patients on either drug

Favorable Safety Profile

Sedation was the most commonly reported adverse reaction. No extrapyramidal symptoms (EPS) developed, and minimal abnormal involuntary movements present in four patients at baseline showed no increase in severity during the trial.

Elderly patients should be observed closely since they appear to be more susceptible to hypertension and neuromuscular reactions.

Be sure you're the doctor...always specify



CHARLES C THOMAS . PUBLISHER

New! BASIC HANDBOOK OF TRAINING IN CHILD AND ADOLESCENT PSYCHIATRY written and edited by Richard L. Cohen and Mina K. Dulcan. Experts herein review and describe an integrated approach to child psychiatric training and education. They discuss the background of child and adolescent psychiatry and provide guidelines for training in such areas as psychopharmacology, developmental disabilities, pediatric consultation, and chief residencies. 87, \$68.75

New! PSYCHOTHERAPEUTIC APPROACHES TO SPECIFIC DSM-III-R CATEGORIES: A Resource Book for Treatment Planning by Kenneth Urial Gutsch. This book provides descriptions of specific DSM-III-R disorders, identifiable character traits, listings of current assessment instruments, and steps by which the potential for better treatment becomes possible. Jan. '88, about \$36.50

New! CLINICAL MANAGEMENT OF SUBSTANCE ABUSE PROGRAMS by Robert J. Craig. Focusing on the clinical management of programs, this unique work addresses patient assessment through the use of psychological tests and examines specific models of treatment. The multimodal approach, a combined treatment approach, and matching treatment concepts to individual needs are covered. Program evaluation activities and ways to reduce patient attrition are also discussed. '87, \$37.50

New! INVOLUNTARY CIVIL COMMITMENT OF THE MENTALLY ILL IN THE POST-REFORM ERA by Robert D. Miller. The author discusses the three major definitional criteria for commitment—mental disorder, dangerousness, and need for treatment; and examines the procedural criteria of right to counsel, to remain silent, to treatment, to least restrictive environment, to refuse treatment, and access to records. '87, \$42.75

New! CLINICAL RESEARCH IN SCHIZOPHRENIA: A Multidimensional Approach edited by Roy R. Grinker, Sr. and Martin Harrow. This book focuses on theoretical and diagnostic issues, disordered cognition, major aspects of psychopathology, overall prognosis and outcome, long-term institutionalization and cognitive deficit, and many other topics. '87, \$55.00

New! A REVIEW OF PERSONALITY THEORIES by Victor J. Drapela. Ranging from psychoanalysis to behaviorism and from psychosocial to humanistic and existential approaches, this book discusses the major theories of personality. Explanatory drawings complement the text, and each chapter features a study guide on the discussed theory. A special section assists readers in classifying personality theories in terms of their underlying philosophical assumptions. '87, \$19.75

HYPNOSIS COMPLICATIONS: Prevention and Risk Management by Frank J. MacHovec. This informative book focuses on the unexpected problems and complications of hypnosis. Risk evaluation; itemized risk factors related to subjects, hypnotists and the environment; malpractice; and risk management including crisis intervention all receive indepth coverage. '86, \$24.75

New! THE EXPERT WITNESS SURVIVAL MANUAL by Frank J. MacHovec. This practical book helps the expert witness new to court to prepare psychologically as well as professionally for courtroom testimony. Chapters focus on the adversary system, typical lawyer attitudes and approaches, expert credibility, conflicting testimony, and survival tactics. '87, \$29.75

New! PSYCHIATRIC ASPECTS OF PERSONAL IN-JURY CLAIMS by George Mendelson. Here is an authoritative source on the psychiatric assessment of personal injury claimants. The author covers the fundamental concerns of psychiatric evaluation, the disorders most often diagnosed among personal injury litigants, and the effects compensation and litigation have on medical and surgical treatment. Jan. '88, about \$39.75

New! DISULFIRAM (ANTABUSE®) – A UNIQUE MEDICAL AID TO SOBRIETY: History, Pharmacology, Research, Clinical Use by Ronald W. McNichol, John A. Ewing, and Morris D. Faiman. Professionals will herein find a wealth of clinical information on an important treatment option for the disease of alcohol addiction—disulfiram (Antabuse®). This book encompasses a compilation of research on this unique medical aid, its pharmacodynamics, pharmacokinetics and toxicology. '87, \$19.75

New! SCIENTIFIC ASPECTS OF GRAPHOLOGY: A Handbook edited by Baruch Nevo. Critically examining the scientific evidence of handwriting behavior, this work addresses the prejudice that hinders graphological research. It covers the major schools of graphology, situational effects on handwriting, uses of graphology in personal management, and validity studies. '87, \$40.50

New! THE ADOLESCENT MOLESTER by William Breer. Focusing on the adolescent who molests younger children, this book explores the long-identified connection between being a victim and becoming an offender. The author discusses the dynamic factors which drive some boys to molest, clinical assessment, group psychotherapy, treatment modalities, and transference. '87, \$34.75

PSYCHIATRIC SEQUELAE OF CHILD ABUSE: Reconnaissance of Child Abuse and Neglect – Evaluation, Prospects, Recommendations by Jamia Jasper Jacobsen. By integrating the work of leading theoreticians and clinicians, the author provides a definitive guide to child abuse and neglect. It analyzes and explains psychological processes in violence, family violence, dynamics of child abuse, sexual abuse, psychological maltreatment, and the repercussions of child abuse. '86, \$29.25

THERAPEUTIC COMMUNITIES FOR ADDICTIONS: Readings in Theory, Research and Practice edited by George De Leon and James T. Ziegenfuss, Jr. This mostly original anthology describes both hierarchical and democratic therapeutic communities for various addictions. It reports the results produced by various programs, and it grapples with issues related to the future of therapeutic communities. '86, \$32.75

Order direct for fastest results • Write or call (217) 789-8980 • Books sent on approval Postage paid on MasterCard, Visa & prepaid orders • Catalog sent on request

2600 South First Street • Springfield • Illinois • 62794-9265





The active metabolite of amitriptyline

All the efficacy of amitriptyline <u>and</u> a favorable side effect profile

Because of anticholinergic activity, PAMELOR (nortriptyline HCl) should be used with caution in patients who have glaucoma or a history of urinary retention.

Contraindications: 1) Concurrent use with a monoamine oxidase (MAO) inhibitor, since hyperpyretic crises, severe convulsions, and tatalities have occurred when similar tricyclic antidepressants were used in such combinations; MAO inhibitors should be discontinued for at least two weeks before treatment with Pamelor* (nortriptyline HCI) is started. 2) Hypersensitivity to Pamelor (nortriptyline HCI), cross-sensitivity with other dibenzazepines is a possibility. 3) The acute recovery period after myocardial infarction.

cute recovery period after myocardial infarction.

Warnings: Give only under close supervision to patients with cardiovascular disease, because of the tendency of the drug to produce sinus tachycardia and to prolong conduction time; myocardial infarction, arrhythmia, and strokes have occurred. The antihypertensive action of guanethidine and similar agents may be blocked. Because of its anticholinergic activity, nortriptyline should be used with great caution in patients who have glaucoma or a history of urinary retention. Patients with a history of seizures should be followed closely, since nortriptyline is known to lower the convulsive threshold. Great care is required in hyperthyroid patients or those receiving thyroid medication, since cardiac arrhythmias may develop. Nortriptyline may impair the mental and/or physical abilities required for the performance of hazardous tasks, such as operating machinery or driving a car, therefore, the patient should be warned accordingly. Excessive consumption of alcohol may have a potentiating effect, which may lead to the danger of increased suicidal attempts or overdosage, especially in patients with histories of emotional disturbances or suicidal ideation.

Use in Pregnancy — Safe use during pregnancy and lactation has not

Use in Pregnancy — Safe use during pregnancy and lactation has not been established; therefore, in pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards.

Use in Children – Not recommended for use in children, since safety and effectiveness in the pediatric age group have not been established

Precautions: Use in schizophrenic patients may result in an exacerbation of the psychosis or may activate latent schizophrenic symptoms: in overactive or agitated patients, increased anxiety and agitation may occur, in manic-depressive patients, symptoms of the manic phase may emerge. Administration of reserpine during therapy with a fricyclic antidepressant has been shown to produce a "stimulating" effect in some depressed patients. Troublesome patient hostility may be aroused. Epileptiform seizures may accompany administration. Close supervision and careful adjustment of dosage are required when used with other anticholinergic drugs and sympathomimetic drugs. Concurrent administration of cimelidine can produce clinically significant increases in the plasma concentrations of the tricyclic antidepressant. Patients should be informed that the response to alcohol may be exaggerated. When essential, may be administered with electroconvulsive therapy, although the hazards may be increased. Disconlinue the drug for several days, if possibile, prior to elective surgery. The possibility of a suicidial attempt by a depressed patient remains after the initiation of treatment; in this regard, it is important that the least possible quantity of drug be dispensed at any given time. Both elevation and lowering of blood sugar levels have been reported.

Adverse Reactions: Cardiovascular—Hypotension, hypertension, lachycardia, palpitation myocardial infarction, arrhythmias, heart block, stroke Psychiatric—Confusional states (especially in the elderly) with hallucinations, disorientation, delusions, anxiety, restlessness, agitation; insomnia, panic, nightmares, hypomania, exacerbation of psychosis. Neurologic—Numbness, tingling, pares-

thesias of extremities, incoordination, ataxia, tremors, peripheral neuropathy: extrapyramidal symptoms; seizures, alteration in EEG patterns, tinnitus. *Anticholmergic*— Dry mouth and, rarely, associated sublingual adentits, blurred vision, disturbance of accommodation, mydriasis; constipation, paralytic ileus, urinary retention delayed micturition, dilation of the urinary tract. *Allergic*— Skin rast, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue), drug fever, cross-sensitivity with other tricyclic drugs. *Hemalologic*—Bonemarrow depression, including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal*—Nausea and vomiting, anorexia, epigastric distress, diarrhea, peculiar taste, stomatitis, abdiminal cramps, black-longue *Endocrine*—Gynecomastia in the male, breast enlargement and galactorrhea in the female; increased or decreased libido, impotence, testicular swelling, elevation or depression of blood sugar levels; syndrome of inappropriate ADH (antiduretic hormone) secretion. *Other*—Jaundice (simulating obstructive), altered liver function weight gain or loss, perspiration; flushing, urinary frequency, nocturia, drowsiness, dizziness, weakness, fatigue, headache, parolid swelling, alopecia. *Withdrawal Symptoms*—Though these are not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache, and malaise.

headache, and malaise.

Overdosage: Toxic overdosage may result in confusion, restlessness, agitation, vomiting, hyperpyrexia, muscle rigidity, hyperactive
reflexes, tachycardia. ECG evidence of impaired conduction, shock,
congestive heart failure, stupor, coma, and CNS stimulation with convulsions followed by respiratory depression. Deaths have occurred
with drugs of this class. No specific antitote is known, general supportive measures are indicated, with gastric lavage.



Calendar

For free listing of your organization's official annual or regional meeting, please send us the following information: stonsor, location, inclusive dates, type and number of continuing education credits (if available), and the name, address, and telephone number of the person or group to contact for more information. All notices and changes must be received no later than 120 days before the first day of the month of desired publication and should be addressed to Calendar, American Jou val of Psychiatry, 1400 K St., N.W., Washington, DC 20005. Because of space limitations, only listings of meetings of the greatest interest to Journal readers will be included.

FEBRUARY

February 4–6, Third International Conference on Monoclonal Antibody Immunoconjugates for Cancer, San Diego. Contact Office of CME, M-017, UC San Diego School of Medicine, La Jolla, CA 92093; 619-534-3940.

February 8–12, annual meeting, American Group Psychotherapy Association, New York. Contact Marsha S. Block, Chief Executive Officer, 25 East 21st St., 6th Fl., New York, NY 10010; 212-477-2677.

February 11–16, annual meeting, American Association for the Advancement of Science, Boston. Contact Alvin W. Trivelpiece, Executive Officer, 1333 H St., N.W., Washington, DC 20005; 202-326-6400.

February 12–15, annual meeting, American Association for Geriatric Psychiatry, Los Angeles. Contact Charles A. Shamoian, M.D., President, P.O. Box 376A, Greenbelt, MD 20770; 301-220-0952.

February 17–21, annual meeting, American College of Psychiatrists, Tucson, Ariz. Contact Alice Conde Martinez, Executive Director, P.O. Box 365, Greenbelt, MD 20770; 301-345-3534.

February 29-March 3, First International CLIN-REG Conference & Expo '88, New Brunswick, N.J. Contact The Center for Professional Advancement, CLIN-REG Conference & Expo '88, P.O. Box 964, East Brunswick, NJ 08816-0964; 201-238-1600.

MARCH

March 3-5, annual meeting, American Psychopathological Association, New York. Contact Lee Robins, Ph.D., President, 4940 Audubon Ave., St. Louis, MO 63110.

March 3-5, annual meeting, Society of Professors of Child Psychiatry, Scottsdale, Ariz. Contact Joseph Green, M.D., President, 3615 Wisconsin Ave., N.W., Washington, DC 20016; 202-966-7300.

March 3-6, annual meeting, American College of Physicians, New York. Contact John Ball, M.D., J.D., Executive Vice-President, 4200 Pine St., Philadelphia, PA 19104; 215-243-1200.

March 4-8, 6th World Congress of the World Association for Dynamic Psychiatry and XIX International Symposium

of the German Academy for Psychoanalysis, Munic : Germany. Contact Lehr-und Forschungsinstitut für Dynanische Psychiatrie und Gruppendynamik, Wielandstr. 27/28, 1000 Berlin 15, Berlin-West, FRG; 030-881-89-50.

March 6–8, part II examinations, American Board of 'sychiatry and Neurology, San Francisco. Contact Step en C. Scheiber, M.D., Executive Secretary, ABPN, 500 Lak Cook Rd., Suite 335, Deerfield, IL 60015; 312-945-7900.

March 9-12, annual meeting, Association for Ac demic Psychiatry, Tampa, Fla. Contact Mary O'Loughlin, I ept. of Psychiatry, Mount Auburn Hospital, Cambridg, MA 02238; 617-492-3500, ext. 4309.

March 9–12, Sixth Annual Symposium in Forensic I sychiatry, American College of Forensic Psychiatry, Palm Syrings, Calif. Contact Ed Miller, Executive Director, 2670 Quail Creek, Suite 295, Laguna Hills, CA 92656; 714-831 0236.

March 14–19, annual meeting, American Society of linical Hypnosis, Chicago. Contact William F. Hoffmann, Jr. Executive Vice-President, 2250 East Devon Ave., Suite 3:6, Des Plaines, IL 60018; 312-297-3317.

March 17, annual meeting, American Board of Aedical Specialties, Chicago. Contact Donald G. Langsley M.D., Executive Vice-President, One American Plaza, Sur & 805, Evanston, IL 60201; 312-491-9091.

March 20–22, Second International Egyptian Congress on Psychiatry, Cairo. Contact Prof. Farouk Lotaief, Secretary General of the Congress, 1A-26 July St., Apt. 801 Cairo, Egypt; 935-837.

March 20–23, annual meeting, American Associat on for Counseling and Development, Chicago. Contact Patrick J. McDonough, Ed.D., Executive Director, 5999 St venson Ave., Alexandria, VA 22304; 703-823-9800.

March 20–23, annual meeting, American College of Mental Health Administration, Woodstock, Vt. Contact Per Pearson, Administrative Assistant, P.O. Box 66, White River Junction, VT 05001; 802-295-9363, ext. 591.

March 24–25, Fourth National Traumatic Brain Injury Symposium, Maryland Institute for Emergency Sedical Services Systems, Baltimore. Contact Roberta Schwartz, M.Ed., CCC/SLP, Director, Speech-Communication Disorders Program, MIEMSS, 22 S. Greene St., Baltimo c, MD 21201; 301-328-6101.

(Continued on pt ;2 A26)

Books Received

Encyclopedia of Neuroscience, vols. I and II, edited by George Adelman. Boston, Birkhäuser, 1987, 1308 pp., \$125.00.

The Practice of Clinical Health Psychology, by Cynthia D. Belar, William W. Deardorff, and Karen E. Kelly. New York, Pergamon, 1987, 157 pp., \$21.50; \$11.95 (paper).

L. Ron Hubbard: Messiah or Madman? by Bent Corydon and L. Ron Hubbard, Jr. Secaucus, N.J., Lyle Stuart, 1987, 402 pp., \$20,00

Workers With Multiple Chemical Sensitivities: Occupational Medicine, vol. 2, number 4, edited by Mark R. Cullen, M.D. Philadelphia, Hanley & Belfus, 1987, 804 pp., \$28.00.

phia, Hanley & Belfus, 1987, 804 pp., \$28.00. Shattered Dreams: The Story of Charlotte Fedders, by Charlotte Fedders and Laura Elliot. New York, Harper & Row, 1987, 246 pp., \$17.95.

Psychotherapy: Portraits in Fiction, edited by Jesse D. Geller, Ph.D., and Paul D. Spector, M.A. Northvale, N.J., Jason Aronson, 1987, 302 pp., \$25.00.

Marital and Family Therapy, 3rd ed., by Ira D. Glick, M.D., John F. Clarkin, Ph.D., and David R. Kessler, M.D. Orlando, Fla., Grune & Stratton (Harcourt Brace Jovanovich), 1987, 595 pp., \$39.50.

Autisme Infantile (Infantile Autism): Colloque International INSERM—CNRS à l'Initiative de l'ARAPI, edited by F. Grémy, S. Tomkiewicz, P. Ferrari, and G. Lelord. Paris, INSERM, 1987, 342 pp., 160 French francs (paper).

Problèmatiques V: Le Baquet. Transcendance du Transfert, by Jean Laplanche. Paris, Presses Universitaires de France, 1987, 315 pp., 150 Franch francs (paper).

Explorations in Psychoneuroimmunology, by Ruth Lloyd; George Freeman Solomon, M.D., consulting editor; Martin E. Dorf, Ph.D., consultant in immunology. Orlando, Fla., Grune & Strat-

ton (Harcourt Brace Jovanovich), 1987, 150 pp., \$34.50. Serving the Mentally Ill Elderly: Problems and Perspectives, edited by Elinore E. Lurie, James H. Swan, and associates. Lexington, Mass., Lexington Books (D.C. Heath and Co.), 1987, 239 pp., \$32.00.

New Library of Psychoanalysis 2: Psychoanalysis and Discourse, by Patrick J. Mahony; David Tuckett, general editor. London,

Tavistock and New York, Methuen, 1987, 254 pp., \$39.95; \$12.95 (paper).

Biobehavioral Control of AIDS, edited by David G. Ostrow, M.D., Ph.D. New York, Irvington Publishers, 1987, 252 pp., no price listed.

Super Marital Sex: Loving for Life, by Paul Pearsall, Ph.D. New York, Doubleday, 1987, 372 pp., \$18.95.

Mental Health Issues of the Mexican Origin Population in Texas: Proceedings of the Fifth Robert Lee Sutherland Seminar in Mental Health, edited by Reymundo Rodríguez and Marion Tolbert Coleman. Austin, Tex., Hogg Foundation for Mental Health, 1987, 239 pp., \$9.95 (paper).

Psychotherapeutic Strategies in Late Latency Through Early Adolescence, by Charles A. Sarnoff, M.D. Northvale, N.J., Jason Aronson, 1987, 264 pp., \$30.00.

Psychotherapeutic Strategies in the Latency Years, by Charles A. Sarnoff, M.D. Northvale, N.J., Jason Aronson, 1987, 360 pp., \$37.50.

Psychotherapy and the Obsessed Patient: The Psychotherapy Patient, vol. 3, number 2, edited by E. Mark Stern. New York, Haworth Press, 1987, 158 pp., \$19.95.

The Open Secret: Torture and the Medical Profession in Chile, July 1987, by Eric Stover. Washington, D.C., Committee on Scientific Freedom and Responsibility, American Association for the Advancement of Science, 1987, 82 pp., no price listed (paper).

Cerebral Dynamics, Laterality and Psychopathology: Proceedings of the Third International Symposium on Cerebral Dynamics, Laterality and Psychopathology, edited by Ryo Takahashi, Pierre Flor-Henry, John Gruzelier, and Shin-Ichi Niwa. Amsterdam, Elsevier, 1987, 572 pp., 360 Dutch florins.

The Therapist's Own Family: Toward the Differentiation of Self, edited by Peter Titelman, Ph.D. Northvale, N.J., Jason Aronson, 1987, 347 pp., \$30.00.

Mental Health Services in Pilot Study Areas: Report on a European Study, by World Health Organization Regional Office for Europe. Copenhagen, WHO, 1987, 578 pp., 70 Swiss francs (paper).



BECAUSE ONLY VALIUM





















IS ALWAYS VALIUM























IS ALWAYS VALIUM







IS ALWAYS VALIUM















IS ALWAYS VALIUM







IS ALWAYS VALIUM















IS ALWAYS VALIUM







IS ALWAYS VALIUM















IS ALWAYS VALIUM







IS ALWAYS VALIUM











REMEMBER TO WRITE "DO NOT SUBSTITUTE."
IT PROTECTS YOUR DECISION.

(Continued from page A23)

March 24–26, annual meeting, American Psychosomatic Society, Inc., Toronto. Contact George K. Degnon, Executive Director, 1311A Dolley Madison Blvd., McLean, VA 22101; 703-556-9222.

March 25–27, annual meeting, Association for Child Psychoanalysis, New Orleans. Contact Robert L. Tyson, M.D., President, 6901 Meade St., Pittsburgh, PA 15208; 412-363-0636.

March 27–31, annual meeting, American Orthopsychiatric Association, San Francisco. Contact ORTHO, 19 West 44th St., Suite 1616, New York, NY 10036; 212-354-5770.

March 28-31, 1st International Congress, The Current Status of Treatment in Child and Adolescent Psychiatry—An Update for Clinical Practice, Vienna. Contact Congress Team International (UK) Ltd., 30 Deane Way, Ruislip, Middlesex, HA4 8SX, England; 01-206-0426; Telex 923062.

March 30-April 2, annual meeting, National Council of Community Mental Health Centers, Boston. Contact Frank H. Bailey, Executive Director, 6101 Montrose Rd., Suite 360, Rockville, MD 20852; 301-984-6200.

APRIL

April 6–8, 29th National Student Research Forum, University of Texas Medical Branch, Galveston, Tex. Contact National Student Research Forum, P.O. Box 54–Station 1, UTMB, Galveston, TX 77550; 409-761-3762.

April 13–16, annual meeting, National Council on the Aging, Inc., Washington, D.C. Contact Ruth Blank, Conference and Special Events, 600 Maryland Ave., S.W., West Wing 100, Washington, DC 20024; 202-479-1200.

April 13–17, annual meeting, American Association of Suicidology, Washington, D.C. Contact Julie Perlman, M.S.W., Executive Officer, 2459 South Ash, Denver, CO 80222; 303-692-0985.

April 14–16, annual meeting, Group for the Advancement of Psychiatry, White Plains, N.Y. Contact Jerry M. Lewis, M.D., President, P.O. Box 330, Greenbelt, MD 20770; 301-345-8030.

April 16, annual meeting, Bulimia Anorexia Self-Help, Inc., St. Louis. Contact Felix E.F. Larocca, M.D., President, 6125 Clayton Ave., Suite 215, St. Louis, MO 63139; 314-567-4080.

April 17–20, annual meeting, American Occupational Therapy Association, Phoenix, Ariz. Contact Executive Director, 1383 Piccard Dr., Rockville, MD 20850; 301-948-9626.

April 17–23, annual meeting, American Academy of Neurology, Cincinnati. Contact AAN, 2221 University Ave., S.E., Suite 335, Minneapolis, MN 55414; 612-623-8115.

April 21–24, 19th Annual Medical-Scientific Conference, American Medical Society on Alcoholism & Other Drug Dependencies, Washington, D.C. Contact Claire Osman, AMSAODD Administrative Director, 12 West 21st St., New York, NY 10010; 212-206-6770.

April 21–25, annual meeting, National Council on Alcoholism, Inc., Washington, D.C. Contact Thomas V. Seesel, Executive Director, 12 West 21st St., 7th Fl., New York, NY 10010; 212-206-6770.

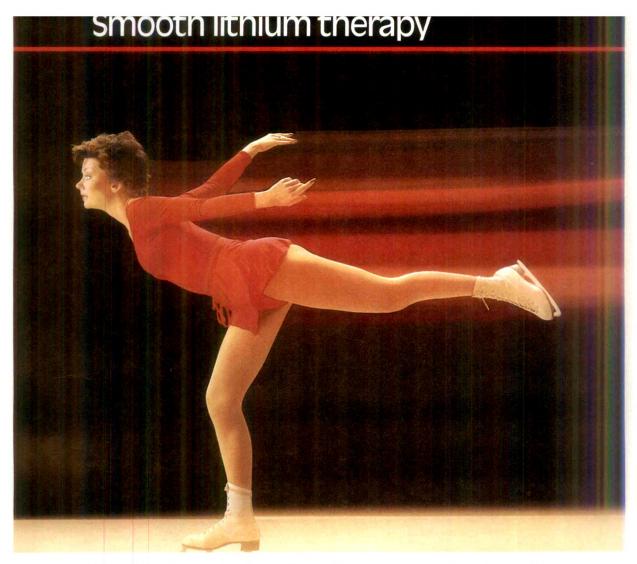
April 23–29, annual meeting, American Occupational Medical Association, New Orleans. Contact Donald L. Hoops, Ph.D., Executive Director, 2340 S. Arlington Heights Rd., Suite 400, Arlington Heights, IL 60005; 312-228-6850.

April 26–30, annual meeting, Society of Behavioral Medicine, Boston. Contact Judith C. Woodward, Executive Director, P.O. Box 8530, Knoxville, TN 37996; 615-974-5164.

April 27-May 1, annual meeting, American Association of Sex Educators, Counselors and Therapists, San Francisco. Contact Ruth Hunt, Ph.D., Executive Director, 11 Dupont Circle, N.W., Suite 220, Washington, DC 20036; 202-462-1171.

April 28–30, First International Congress Asian/Pacific Region, Reflections on Mental Health, Sydney, Australia. Contact Congress Secretariat, P.O. Box 11, Torrens, Canberra, 2607, Australia; 062-86-1588.

April 28-May 1, annual meeting, American Association of Pastoral Counselors, Portland, Ore. Contact James W. Ewing, Ph.D., Executive Director, 9508 A Lee Hwy., Fairfax, VA 22031; 703-385-6967.



with the gradual release action of

ESKALITH CR®

brand of

LITHIUM CARBONATE 450 mg. Controlled Release Tablets

- 'Eskalith CR' therapy diminishes peaks and troughs in serum levels associated with conventional lithium formulations
- 'Eskalith CR' 450 mg. tablet strength frequently simplifies switching from t.i.d. immediate-release therapy to b.i.d. dosage regimen
- B.i.d. dosage with 'Eskalith CR' means fewer missed doses in manicdepressive patients with a history of mania

Smith Kline & French Laboratories

Philadelphia

SK&F

Lithium toxicity is closely related to serum lithium levels, and can occur at doses close to therapeutic levels. Facilities for prompt and accurate serum lithium determinations should be available before initiating therapy.

brand of LITHIUM CARBONATE 450 mg. **Controlled Release Tablets**

Before prescribing, see complete prescribing information in SK&F literature or $\underline{\text{PDR}}$ The following is a brief summary.

WARNING
Lithium toxicity is closely related to serum lithium levels, and can occur at doses close to therapeutic levels. Facilities for prompt and accurate serum lithium determinations should be available before initiating therapy (see DOSAGE AND ADMINISTRATION in the complete prescribing information).

Indications
Treatment of manic episodes of manic-depressive illness. Maintenance therapy prevents or diminishes the intensity of subsequent episodes in those manic-depressive patients with a history of mania

Warnings
Lithium should generally not be given to patients with significant renal or cardio-vascular disease, severe debilitation or dehydration, or sodium depletion.

Chronic lithium therapy may be associated with diminution of renal concentrating ability. Such patients should be carefully managed to avoid dehydration with resulting lithium retention and toxicity. Morphologic changes with glomerular and interstitual fibrosis and nephron atrophy have been reported. Morphologic changes have also been seen in manic-depressive patients never exposed to lithium. During lithium therapy, progressive or sudden changes in renal function, even within the normal range, indicate the need for reevaluation of treatment.

mair ange, indicate the need for reevaluation of treatment.

An encephalopathic syndrome (characterized by weakness, lethargy, fever, tremulousness and confusion, extrapyramidal symptoms, leukocytosis, elevated serum enzymes. BUN and FBS) has occurred in a few patients treated with lithium plus a neuroleptic. In some instances, the syndrome was followed by irreversible brain damage. Patients receiving such combined therapy should be monitored closely for early evidence of neurologic toxicity and treatment discontinued promptly if such signs appear. Caution patients about activities requiring alertness.

Lithium may prolong the effects of neuromuscular blocking agents. Such agents should be given with caution to patients receiving lithium.

Lithium carbonate may cause fetal harm when administered to a pregnant woman If a patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus.

Nursing should not be undertaken during lithium therapy except in rare and unusual circumstances.

Not recommended in children under 12

Elderly patients often require lower lithium dosages to achieve therapeutic serum levels. They may also exhibit adverse reactions at serum levels ordinarily tolerated by younger patients.

Precautions
Caution should be used when lithium and diuretics are used concomitantly Patients receiving such combined therapy should have serum lithium levels monitored closely and the lithium dosage adjusted if necessary.

Sweating, diarrhea and concomitant infection with elevated temperatures may also necessitate a temporary reduction or cessation of medication.

Indomethacin and piroxicam have been reported to increase significantly, steady state plasma lithium levels. There is also some evidence that other nonsteroidal anti-inflammatory agents may have a similar effect. When such combinations are used, increased plasma lithium level monitoring is recommended.

increased plasma lithium level monitoring is recommended.

Adverse Reactions
Adverse reactions may be encountered at serum lithium levels below 15 mEq./l
Mild to moderate adverse reactions may be seen at levels from 1.5 to 2.5 mEq./l, and
moderate to severe reactions may be seen at levels of 2.0 mEq./l and above Fine
hand tremor, polyuria, and mild thirst may occur during initial therapy and may persist throughout treatment. Transient and mild nausea and general discomfort may
also appear during initial therapy. These side effects usually subside with continued
treatment or a temporary reduction or cessation of dosage. Diarrhea, vomiting,
drowsiness, muscular weakness, and lack of coordination may be early signs of lithium intoxication, and can occur at lithium levels below 2.0 mEq./l. At higher levels,
ataxia, giddiness, tinnitus, blurred vision, and a large output of dilute urine may be
seen. Serum lithium levels above 3.0 mEq./l. may produce a complex clinical picture, involving multiple organs and organ systems. Serum lithium levels should not
be permitted to exceed 2.0 mEq./l. during the acute treatment phase.

The following reactions appear to be related to serum lithium levels, including lev-

ture, involving multiple organs and organ systems. Serum lithium levels should not be permitted to exceed 2.0 mEq./l during the acute treatment phase.

The following reactions appear to be related to serum lithium levels, including levels within the therapeutic range. Neuromuscular/Central Nervous System — tremor muscle hyperiritability (fasciculations, twitching, clonic movements of whole limbs) hyperionicity ataxia, choreo-athetotic movements, hyperactive deep tendon reflex, extrapyramidal symptoms including acute dystonia, cogwheel rigidity, blackout spells, epileptiform seizures, slurred speech, dizziness, vertigo, downbeat nystagmus, incontinence of urine or feces, somnolence, psychomotor retardation, restless-ness, confusion, stupor, coma, tongue movements, tics, tinnitus, hallucinations, poor memory, slowed intellectual functioning, startled response, worsening of organic brain syndromes. Cardiovascular—cardiac arrhythmia, hypotension, peripheral circulatory collapse, bradycardia, sinus node dysfunction with severe bradycardia which may result in syncope). Castrointestinal—anorexia, nausea vomiting, diarrhea, gastritis, salivary gland swelling, abdominal pain excessive salivation, flatulence, indigestion. Centrouring—glycosuria, decreased creatinine clearance, albuminuria, oliguria, and symptoms of nephrogenic diabetes insipidus including polyuria, thirst, and polydipsia. Dermatologic—drying and thinning of hair, alopecia, anesthesia of skin, acne, chronic folliculitis, xerosis cutis, psoriasis or its exacerbation, generalized pruritus with or without rash, cutaneous ulcers, angioedema. Autonomic—blurred vision, dry mouth, impotence/sexual dysfunction. Thyroid Abnormalities—euthyroid goiter and/or hypothyroidism lincluding myxedema) accompanied by lower T, and T, 1st uptake may be elevated. See Precautions I Paradoxically, rare cases of hyperthyroidism have been reported. EEC Changes—diffuse slowing, widening of the frequency spectrum, potentiation and disorganization of background rhythm. EKC Changes—

Some reports of nephrogenic diabetes insipidus, hyperparathyroidism and hypothyroidism which persist after lithium discontinuation have been received.

A few reports have been received of the development of painful discoloration of

fringers and toes and coldness of the extremitles within a pain day of the starting of treatment with lithium. The mechanism through which followed is starting of a Raynaud s syndrome developed is not known. Recovery followed is constitutionable.

Cases of pseudotumor cerebri (increased intracranial pressure and papilledema) have been reported with lithium use. Lithium should be discontinued, if clinically possible, if this syndrome occurs.

How Supplied Capsules containing 300 mg. lithium carbonate per capsule, in bottles of 100 and

Tablets containing 300 mg, lithium carbonate per tablet, in bottles of 100 Controlled Release Tablets containing 450 mg. lithium carbonate per tablet, in bot tles of 100

Consultation Service

American Psychiatric Association

Administrative, Organizational, Programmatic, and Quality of Care Consultation to:

- Psychiatric units in general hospitals
- Outpatient clinics
- Private and state psychiatric hospitals
- Specialized hospitals
- Residential programs
- Community mental health centers
- State mental health systems
- Specialized services for:
 - —mentally ill persons
 - -mentally retarded and developmentally disabled persons
 - -children and adolescents
 - —the aging
 - —drug abusers
 - -alcohol abusers
 - -criminal offenders

Our Range of Services Includes but Is Not Limited to:

- conflict resolution
- design and planning of clinical programs
- · analysis of clinical and management
- · integration of services, to provide continuity of care
- evaluation of clinical services
- assistance in developing priorities among service needs
- advice on moving toward compliance with standards of government or private accreditation boards
- aid in meeting the requirements of external planning bodies
- referral to other sources of help
- planning to meet future service needs, consistent with fiscal contingencies

CONTACT:

Consultation Service American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005 (202) 682-6091

Copies of articles from this publication are now available from the UMI Article Clearinghouse.

For more information about the Clearinghouse, please fill out and mail back the coupon below.

UMIArticle Clearinghouse

Yes! I would like to know more about UMI Article Clearinghouse.

I am interested in electronic ordering through the following system(s):

DIALOG/Dialorder
OnTyme
OCLC ILL Subsystem
I am interested in sending my order by mail.
Please send me your current catalog and user instructions for the system(s) I checked above.

Name
Title
Institution/Company
Department
Address
City
State
Zip
Phone (_____)
Mail to: University Microfilms International
300 North Zeeb Road, Box 91 Ann Arbor, MI 48106



The Sixteenth Annual

CLINICAL NEUROLOGY FOR PSYCHIATRISTS

Directed by

David M. Kaufman, M.D.

Disney World, Orlando, Florida: Buena Vista Palace Hotel, Walt Disney World Village Lake Buena Vista, FL 32830 January 29-31, 1988

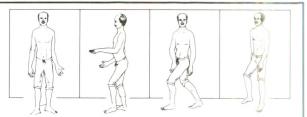
Los Angeles, California: Westwood Plaza Holiday Inn 10740 Wilshire Boulevard, Westwood, Los Angeles, CA 90024 February 19-21, 1988

New York City, New York: The Japan Society 333 East 47th Street, New York, NY 10017 March 11-13, 1988

THE EXPLICIT, CLEAR, & CONCISE WEEKEND PROGRAM

This intensive three-day program, 8:30 am to 5 pm daily, prepares psychiatrists for the American Board of Psychiatry and Neurology. Through extensive use of review sessions, videotape, slides, practice questions and *Clinical Neurology for Psychiatrists*, Kaufman (Grune & Stratton), participants cover: dementia, memory disorders, aphasia, anosognosia, and other perceptual disorders; partial complex and other seizures; neurotransmitter basis of pain; mental as well as physical effects of dominant and non-dominant hemisphere injuries, spinal cord lesions, and peripheral nervous system diseases; dementia and other neurologic manifestations of AIDS; sleep disorders; and CT, MRI, EEG, and CSF analysis.

Approved for 30 Category I CME Credits by Montefiore Medical Center/Albert Einstein College of Medicine



For more information, call (212) 920-6674; or mail coupon with check made payable to Continuing Medical Education for \$350 tuition to: Office of Continuing Medical Education, Montefiore Medical Center, 3301 Bainbridge Avenue, Bronx, NY 10467. (Tuition covers all materials and textbook. To order textbook only, enclose \$50.00 with coupon.)

Neurology for P	me for the sixteenth a sychiatrists (enclose to yable to Continuing N	uition, \$350, US funds;	
Disney World:	Los Angeles:	New York: □	
	me the textbook <i>Clinic</i> only (enclose check, \$ erology'').	0,	
Are you a psyc	hiatrist? yes	no 🗆	
Are you prepar	ng for ABPN? yes	no 🗆	
Name			
Street			
	State	Zip	
Telephone			
	office	home	A

The American Psychiatric Association

1400 K Street, N.W., Washington, D.C. 20005

OFFICERS 1987-1988

George Pollock Paul J. Fink President: President-Elect: Vice-President: Herbert Pardes Vice-President: Allan Beigel Elissa P. Benedek Secretary: Treasurer: Alan Levenson

ASSEMBLY

Speaker: Irvin M. Cohen iker-Elect: John S. McIntyre Recorder: Dorothy A. Starr Speaker-Elect:

MEDICAL DIRECTOR'S OFFICE

Medical Director: Deputy Medical Directors:

Melvin Sabshin Donald W. Hammersley Harold A. Pincus Carolyn B. Robinowitz Jeanné Spurlock

BOARD OF TRUSTEES

Robert J. Campbell III Frederick Gottlieb Lawrence Hartmann Linda Logsdon Philip M. Margolis Carol C. Nadelson Pete C. Palasota Robert O. Pasnau Douglas A. Sargent Chester W. Schmidt, Jr. John A. Talbott Hugo Van Dooren William L. Webb, Jr.

CHAIRPERSONS OF COUNCILS, COMMISSIONS, COMMITTEES, AND TASK FORCES

	CONSTITU	JTIONAL	COMMITTEES
--	----------	---------	------------

Steven S. Sharfstein Leigh M. Roberts Constitution and By-Laws Elections Bernice Elkin William Webb, Jr. Boyd L. Burris John S. McIntyre Robert O. Pasnau Ethics Tellers Membership Nominating Reference Paul J. Fink Resource Development L. Douglas Lenkoski

COUNCIL ON AGING

Gene David Cohen Benjamin Liptzin Eric D. Caine Nursing Homes and Elderly Mentally Ill Alzheimer's Disease Reimbursement for Elderly Mentally Ill Howard Goldman

COUNCIL ON CHILDREN, ADOLESCENTS,

AND THEIR FAMILIES Larry B. Silver Chronically Ill and Emotionally Handicapped Children Confrontational Therapies Marcelino Amaya Mark Blotcky William Buzogany Irving H. Berkovitz Juvenile Justice Issues Psychiatry and Mental Health in Schools Family Violence and Sexual Abuse Sandra J. Kaplan

COUNCIL ON ECONOMIC AFFAIRS

Donald J. Scherl Howard Gurevitz Financing and Marketing JCAH Standards for Hospital-Based, Hospital-Related Services Gerald H. Flamm Interprofessional Affairs Mi Social Security Income/Disability Insurance Mildred Mitchell-Bateman Arthur Meyerson Joseph T. English Robert W. Gibson Prospective Payment Issues Future Trends in Private Insurance Psychiatrist Payment Boris Astrachan Quality Assurance George Wilson

COUNCIL ON INTERNAL

ORGANIZATION Ronald Shellow Arrangements Gilles Plante, Gaston Harnois Scientific Program Robert Hales Film Bernard Morenz Scientific and Physician-Patient Educational Services Exhibits Louis F. Rittelmeyer, Jr. Hugh James Lurie Wandal W. Winn Video Information Systems Grants and Awards Alan I. Levenson Foundations' Fund Prize for Research in Psychiatry Ira Glick

Manfred S. Guttmacher Award Marie H. Eldredge Award Hospital and Community Psychiatry Achievement Awards Isaac Ray Award Ittleson Award Weinberg Memorial Award McGavin Award Vestermark Award Samuel G. Hibbs Award Advertising Headquarters Member Life, Accident, and Health Insurance Special Benefit Programs Personnel Advertisers and Exhibitors Telemedical Services History and Library Exhibits Advisory Friends of the APA PIA Foundation Hospital Research Awards

COUNCIL ON INTERNATIONAL **AFFAIRS** Abuse and Misuse of Psychiatry and

Psychiatrists Inter-American Council Liaison Human Rights Problems of Americans Overseas Psychosocial Aspects of the Middle East Process International Education Joint Meeting in China World Psychiatric Association Regional Symposium in 1988

COUNCIL ON MEDICAL EDUCATION

Terrorism

AND CAREER DEVELOPMENT Administrative Psychiatry Medical Student Education Graduate Education Continuing Education Consultation-Liaison Psychiatry and Primary Care Education Impaired Physician Communication Between APA and ABPN

Robert Stubblefield Bernice E. Coleman

> Gail Barton Richard Rada Dennis Cantwell Sanford Finkel Lenore F.C. Terr Bryce Templeton

Will Strathmann Raymond I. Band

Harvey Bluestone Abram M. Hostetter William Sorum Henry H. Work Jane Preston Lucy Ozarin Joseph B. Honnigford Cynthia Rose H. Richard Lamb

Harold M. Visotsky

Michael R. Zales Evaristo Gomez Lawrence Hartmann Eric Plaut

George Tarjan Normund Wong Herbert Pardes

> Robert Hales Louis J. West

Robert L. Williams Stephen L. Rachlin Gerald A. Melchiode Stefan Stein John W. Goethe

Troy L. Thompson Stephen Scheiber Richard I. Shader

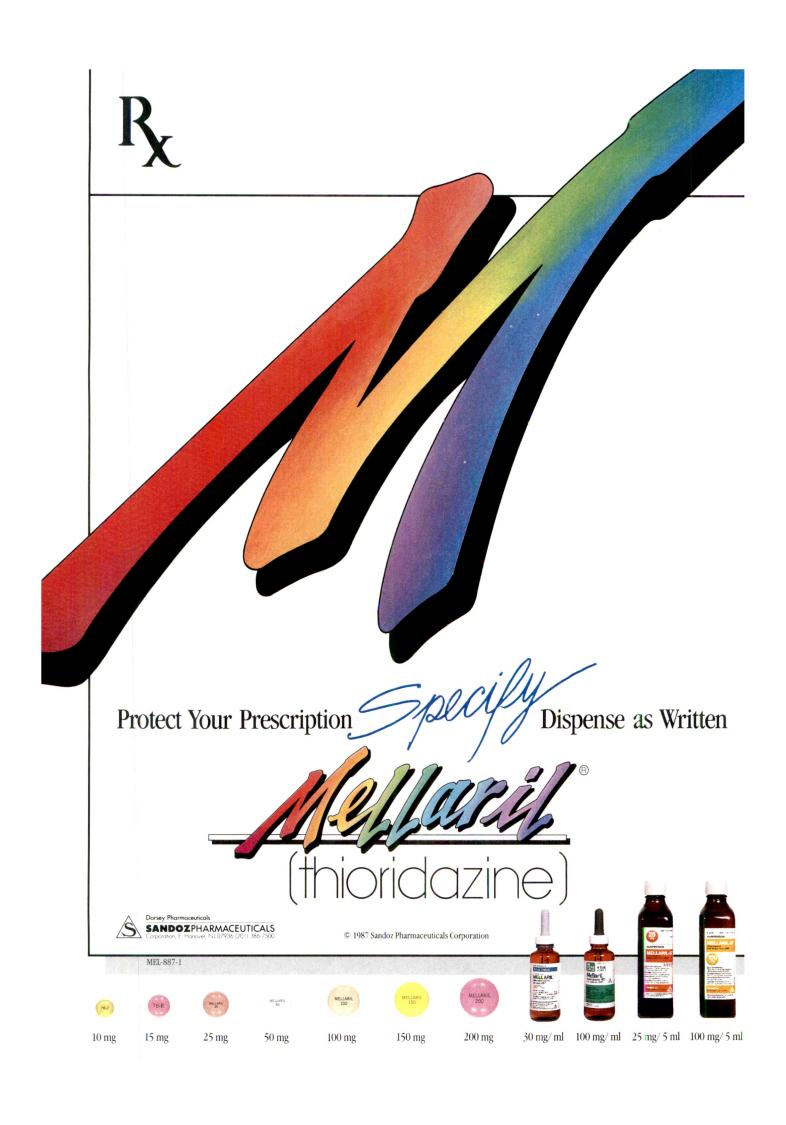
Recertification Independent Study PKSAP-VI Residents APA/Burroughs Wellcome Fellowship	Herbert Pardes Ian Alger Gordon Darrow Strauss Phyllis Amabile Walter E. Barton	Private Practice Jails and Prisons Psychiatric Services in the Military Practice of Psychotherapy Practice Issues in Organized/Managed Care	James Aargolis Henry Veinstein Leonora K. Petty Marcia Kroft Goin Haroutun Babigian
APA/Mead Johnson Fellowship Minority Fellowship Program Psychiatric Leadership in Public Mental Health Programs Cost Effectiveness in Consultation-	James T. Barter Charles Pinderhughes Steven Edward Katz	COUNCIL ON PSYCHIATRY AND LAW Confidentiality COUNCIL ON RESEARCH	Howard V Zonana Aro S. Wolf Herbe: Pardes
Liaison Psychiatry F	rederick G. Guggenheim	Use of Laboratory Tests in Psychiatry Safety and Performance Standards for	Alexander (. assman
COUNCIL ON NATIONAL AFFAIRS Abuse and Misuse of Psychiatry in U.S. Asian-American Psychiatrists Black Psychiatrists	Pedro Ruiz Roger Dale Walker Joyce S. Kobayashi Thelissa A. Harris	Electroconvulsive Therapy Devices Long-Term Effects of Lithium on Kidney Sudden Death Treatments of Psychiatric Disorders	Richard I Weiner George R. eninger George M. Simpson T. Byran Karasu
American Indian and Alaskan Native Psychiatrists Foreign Medical Graduates Religion and Psychiatry Hispanic Psychiatrists	Linda Cross S. Arshad Husain Marc Galanter Gladys Egri	Tardive Dyskinesia Psychosocial Treatment Research Biographical Directory Benzodiazepine Dependency Psychiatric Diagnosis and Assessment	John Mich el Kane John P. Focherty David J. Knesper Car Salzman Aller Frances
Women Gay, Lesbian, and Bisexual Issues Occupational Psychiatry	Nada Logan Stotland James Paul Krajeski Duane Q. Hagen	Research on Psychiatric Treatments COMMISSION ON JUDICIAL ACTION	John M. Kane Paul A pelbaum
Psychiatric Aspects of AIDS Psychological Aspects of Nuclear Arms Development	Stuart E. Nichols, Jr. Judith E. Lipton	CONSULTATION SERVICES BOARD	Dave M. Davis
Victimization	Martin Symonds	ETHICS APPEALS BOARD	Elissa I Benedele
COUNCIL ON PSYCHIATRIC SERVICES Federal Government Health Services	Naomi Goldstein William B. Hunter	JOINT COMMISSION ON PUBLIC AFFAIRS	Harvey i Ruber
Alcoholism Drug Abuse Rehabilitation State Mental Health Systems	Richard J. Frances Edward Kaufman Arthur T. Meyerson Ernest Klatte	JOINT COMMISSION ON GOVERNMEN RELATIONS	T John J. McGrath
American Hospital Association Functions of the Hospital and Community Psychiatry Service, Journal, and Institute Commission on Professional and Hospital	e H. Richard Lamb	SPECIAL COMPONENTS Investment Advisory Committee Long-Range Planning Committee Executive Compensation Committee	Frederi & Amling John \(\) Talbott Robert J. Campbell III
Activities Institute on Hospital and Community Psychiatry Program	Henry Pinsker Stuart L. Keill	Work Group on Federal Government Organizational Structure Conference on Future of Psychiatry	Daniel X. Freedman John ', Talbott
Chronically Mentally Ill	David Cutler	Liaison With PRMS, Inc.	Alar Levenson

Coming in the January 1988 issue of

THE AMERICAN JOURNAL OF PSYCHIATRY

Developmental Psychiatry Comes of Age By John Bowlby

Significance and Meaning of Neurological Signs in Schizophrenia By Douglas W. Heinrichs and Robert W. Buchanan



Elements of the Private Therapeutic Interview

Norman E. Zinberg, M.D.

A previous paper explored the differences between a psychiatric interview that is entirely private and one observed by way of a mechanical device. The attempt to explore such differences raises questions about what are the special elements in the private interview that rely heavily on privacy. This paper focuses on 1) the specific rhythms that are worked out within each patient-therapist dyad; 2) the quality of the concentration of one individual on another; 3) the capacity for undoing, or taking back, previously stated positions; and 4) the difference between the intimacy developed through privacy in everyday social situations and that achieved in the therapeutic relationship.

(Am J Psychiatry 1987; 144:1527–1533)

In a recent paper (1) considering the effects of the increased use of such mechanical devices as one-way screens and audio and video tapes to capture therapeutic interviews, I discussed the difficulties in quantifying the subjectively discernible differences between the private and the observed, or public, interview. Such differentiation between the private and public interview, although valuable in its own right, does not define those elements within the private interview which make possible a particular working intimacy, an intimacy that might be interfered with if it were to become public. This paper, after showing how little the literature has addressed that topic, will consider four essential elements of private therapy: 1) the specific rhythms, boundaries, attitudes, and judgments that are

worked out within each patient-therapist dyad; 2) the quality of the concentration of one individual on another; 3) the capacity for undoing, or taking back, previously stated positions, which may be of even greater importance to the therapist than to the patient; and 4) the difference between the intimacy developed through privacy in everyday social situations and that achieved in the therapeutic relationship.

REVIEW OF THE LITERATURE

My earlier article cited papers that mentioned the similarity between training analyses and other forms of supervision (2, 3) and the intrusions caused by direct observation of the one-to-one situation. The particular issue of supervision as well as the issues of privacy in couple, family, and group therapy will not be discussed here but will be dealt with in a later paper.

The most compelling reason to breach the privacy of the therapeutic interview is to open up the process of research, evaluation, and teaching. The therapist's ability to fulfill the therapeutic task while serving as a formal researcher has been considered by several writers (3–6) who disagree sharply with one another. Undoubtedly, in the past the field has been influenced by Sigmund Freud's view that therapeutic and research aims are antithetical (7). This view has been opposed not only by significant professional contributors but also by informed, nonprofessional intellectual opinion (8, 9) which argues in favor of recording or observing because of the need for research and evaluation (2, 5, 10-14). The sparse direct experimental studies of interviews suggest that observation may affect patients more than the analytic literature suggests (15-19). Both analytic and experimental studies question whether the personalities of patient and therapist may dictate the extent of the effect of observation. Roberts and Renzaglia (17) show the patient making more favorable self-references while being recorded but, as with the other works, do not detail what this might

Received Feb. 7, 1986; revised Sept. 29, 1986; accepted Nov. 20, 1986. From the Department of Psychiatry, Harvard Medical School, Boston; and the Cambridge Hospital. Address reprint requests to Dr. Zinberg, the Cambridge Hospital, 1493 Cambridge St., Cambridge, MA 02139.

The author thanks R. William Betcher, Ph.D., M.D., for his help with the review of the literature and other parts of the paper.

Copyright © 1987 American Psychiatric Association.

mean in a therapy. Even the excellent study at the Columbia University Center for Psychoanalytic Training, while discussing the conflict that exists about the problem of invasion of privacy, stresses the problems that are considered the result of invasion of privacy, rather than considering what existed before the invasion (20).

Those discussions in the literature which focus on the nature of privacy itself appear in the field of sociology rather than in psychiatry or psychology. This is in line with a long tradition of sociological interest in how society protects or intrudes on the privacy of individuals and institutions, starting with the work of Georg Simmel (21), a founder of the discipline. His writings on the psychological conditions necessary for the development of intimacy and other close social ties, which antedate modern psychotherapy, have a direct bearing on the four essential elements of private therapy that are the subject of this paper. His view that the fragmentation of personal experience and the breakup of coherent social roles interfere with the subjective experience of intimacy is relevant to the establishment of rhythms, boundaries, developing qualities of concentration, and the capacity within the therapeutic interaction to take back positions, i.e., the first three elements discussed in this paper. Simmel's understanding of the function of social interactions (21), as, for example, at a party, is pertinent to the differences in intimacy developed in the therapeutic situation versus others and is pertinent to our fourth element. His comments on the way in which information flows across boundaries, particularly in the case of secret societies, has been considered recently in relation to psychoanalysis (22) and will form a part of my considerations of supervision and privacy in a later paper. By calling attention to containment of knowledge as a vital factor in power and, by implication, in ethics, Simmel foreshadows much later work on those subjects in relation to privacy as well as its general importance in human development. One writer (23), for example, likens the advent of the door, i.e., privacy, to the discovery of fire in its impact on our view of man as a social creature.

Schuster (24) and Schwartz (25) consider the issues of ethics and power raised by the intrusion of observation into the psychoanalytic situation. Proof that absolute power was symbolized by the right to invade privacy, the most egregious example of which was droit du seigneur, was given by the framers of the Constitution, who sharply differentiated a democracy from a monarchy by guaranteeing the sanctity of a man's (not a woman's) home from invasion without due process of law. Schwartz (25) recognizes the anomaly that servants have a degree of access to their masters that in fact does away with their masters' treasured privacy. He notes that an extreme rank, either high (such as a physician) or low (as with the servant), is accorded to those in whose presence boundaries of privacy are voluntarily breached. Sociological considerations, however, are innately concerned with the individual within his or her larger social newhereas the therapist must also consider the natu this interaction from an interpersonal point of not to mention the influence of privacy on the int functioning of the individual in therapy.

THE RHYTHMS OF THERAPY

The psychotherapeutic situation is highly sty for functional reasons. It is not the usual social s tion with its manifold social purposes, suc strengthening or minimizing personal ties, getting iness transacted, or establishing power or influ-The psychotherapeutic situation is designed to pe tiate the study of itself and one of its particip Within this purposeful interaction, nuances of ges response, and language on the part of the pa gradually become important. Slowly and subtly, reveal the characteristic, repetitious ways in which person views both the inner (intrapsychic) and c (interpersonal) worlds. The patterns by which I she engages and interacts with the therapist aroun single goal of learning about himself or herself—I Hartmann (26) calls therapy the study of self-d and its motivations—become the focus of the i

The patient is not alone; in fact, such metapho the dance may be useful in symbolizing the therap activity. Freud originally used the word "mirror describe the therapist. Yet it took little time for and others to recognize that completely impaneutrality is a human impossibility. From Ferencz Sullivan through Gill, therapists have seen tha reality of the activity of both participants mus scrutinized if the transference—the recognition o unreality of the situation, one of Freud's great ir native leaps—can occur with conviction. Above therapists wish, whether they achieve it or no avoid pretense. To the extent that this is possible, try not to agree, as people do so regularly in ordi social situations, that shadow is substance.

Patient and therapist try not to accept super intellectualization as an authentic representatio understanding. In "parlor" psychiatry or with incrienced therapists, quick and facile connections made, for example, when the therapist shows tha patient's resentment of the therapist's misunderst ing the point of an anecdote stands for irrational stemming from the patient's childhood rage at par misunderstanding. For such connections to mean thing, they require many convincing, emotion charged repetitions in other areas of the patient's li well as in the relationship of this current reaction therapy to its antecedents. Not only is there recognition that for something to be emotionally vincing a person must see the highly individual, a matic, personally repetitious ways of perceivin consistent and "true" for the sake of what we "therapy," but also there is a subtle psychos interaction between therapist and patient that in their working together they do not accept as "true" anything that does not have the quality of emotional conviction. Let me illustrate this point with an example.

One man who was pleased with his therapy kept congratulating himself on his discoveries about himself, most of which had to do with his ability to stand up to his wife because he had come to know more about his wish for her to take over. This selfcongratulation was sufficiently repetitious for the therapist to question the reason for it. The patient responded with considerable hurt feeling, accusing the therapist of not being sufficiently encouraging. In other areas, it had become increasingly apparent that the patient wanted to appear as a near saint, on the side of rightness and the law at all times. A virtual fanatic about driving and traffic regulations, he would turn the other cheek if mistreated by others, to the point that his virtue would be beyond dispute. After the interaction about self-congratulation, he was surprised and rueful to find how powerful was the impulse to continue recounting a success that stemmed from insight gained in therapy. A good rule for therapists is never to point out to reasonably intelligent persons something that is painfully obvious. If patients were prepared to see something so obvious, they would. It took a long time for this man to realize that the repetitious desire to congratulate himself represented his desire for the therapist to congratulate him as an announcement that he was just as pure in therapy as he was everywhere else. Even he recognized that the "gains" that he was congratulating himself for in his life outside of therapy felt unreal to him. The motive for recounting them seemed convoluted and irrational; it was done more to obtain congratulations than for any change in his actual life experiences.

The patient's bitterness because the therapist was not sufficiently encouraging reemerged now and again; but after the initial recognition of his wish to be congratulated, it was easy for the therapist to ask how the purported gains actually worked in his life. By then he was reluctantly willing to think through what was experienced as advantageous for him in his actual life and what was aimed at an appearance of goodness that he himself mistrusted. The patient realized that he sought such an appearance repeatedly even though it left him feeling dissatisfied and vulnerable to the least questioning.

The interaction just described is typical of all therapies. It exemplifies the subtle establishment of boundaries—rhythms, if you will. In long-term, private therapy the rhythm is very different from that achievable in the one or two interviews of a consultation. Yet even in that brief contact, if things go reasonably smoothly, some aspects of a rhythmic interaction begin to develop.

In the interaction just described, after the therapist's initial question about the patient's self-congratulations, the development of a rhythm came slowly, but in

later sessions the pace quickened. The patient, in spite of himself, began to feel that the self-knowledge gained about his wish for his wife to take over could be put to some profitable use in the world outside of therapy. The therapist then pointed out that the wishes for encouragement and the feelings which accompanied them might be of great interest in the therapy and that perhaps those feelings would be more available when they were looked at as an important desire instead of being acted on as a demand from the therapist.

At this point the therapist was leading a step "inward," to use the dance metaphor, to the more d rectly intrapsychic. At such a moment the patient/partner's observing ego follows the therapist/leader closely as he or she notes wryly that in therapy we think about and look at such feelings rather than committing ourselves to them as an act with an expectation that it will be responded to in kind. Once that point is established, the patient rhythmically becomes the leader and the therapist the follower. With this new understanding, the patient reports on events, inner and outer, from a slightly changed perspective, which in time opens up an opportunity for one of them to start a new step.

In all of these interactions, the consistencies in the approach to how a human being works form part of a theoretical structure. The notion of an ego that perceives, regulates, discharges, defends, forms coherent series of attitudes, and finally adapts underlies all of them. It is likely, however, that no two therapistpatient dyads will establish exactly the same rhythms, boundaries, areas of judgment, insistence on preciseness, degree of encouragement, effort to convey a sense of what the experience out there and in here feels like, or actual movement. Within the confines of an anomalous 50-minute hour, the therapist and patient work these things out between them. Some steps begin very quickly in the first hour or so; most occur more slowly over time and with practice. This is a deeply intimate experience and requires great attention from one to the other. It does not matter that the therapist dances the next 50-minute dance with another partner or that the patient says he or she gave not a single thought to the therapy between sessions. During that particular 50minute space and time, the two react exclusively to each other. They both know that the therapist's job requires him or her to objectify the steps even while dancing; but for the patient that realization grows slowly, as does the awareness that at a certain mement the patient will leave this specially constructed laboratory to return to a larger world to experiment with what he or she has thought about during the dance.

THE QUALITY OF CONCENTRATION

As the capacity develops, within this private situation, to concentrate on establishing rhythm, pace, boundaries, judgments, and language, the consciousness of each partner rests exclusively on the other. The patient, whether only dimly aware of the therapist or

hypersensitive to every intake of breath, is also concerned with the content under discussion—again with sometimes more and sometimes less concentration—as well as with what is not being said. No matter how zealous an advocate of free association a therapist may be, he or she recognizes that the patient always has a series of choices, or forks in the road, and that after one has been chosen, the others may be lost sight of. The choice of one fork over the other may be either deliberate or spontaneous, but the situation always resembles a network of roads rather than a single path. In addition, different levels of intensity are available to the patient, and the amount of direct interest in what is being talked about varies, as does the degree of selfconsciousness about the particular items, with the ever-present possibility of confusion or embarrassment.

The therapist, too, participates in the situation differently at different times. It would be sheer selfdelusion to imagine that there are not different levels of energy available on different days or at different times. Minds do wander. It would be my, perhaps selfserving, contention that with greater experience, the hovering attention that Freud speaks of does indeed remain operative, and the wandering mind can be pulled back on course as the patient's words or silence begins to form a pattern. And, when necessary, the dormant energy can be summoned. Besides the therapist's mental side trips, he or she is continually engaged in juggling levels of thought. Respectful attention must be paid to the content of the discussion, the patient's story. But that content, whether intellectual or affective, serves only to exemplify the patterns, consistencies, and context that emerge. This emphasis on the use of the patient's content, chiefly in order to show clearly the consistency of his or her personality structure and the form of his or her conflicts, requires consistent consciousness of both. No one's direct conscious memory is that good.

The therapist's consciousness or memory of the previous hour, week, or month may lie dormant, but it can be reawakened by a word, phrase, or story that indicates the structural consistency. Only the inexperienced therapist will respond directly to content alone or believe that the recovery of affects per se is useful without an understanding of where they fit into the way the patient thinks about the world. When the self-congratulatory man referred to earlier raged about the carelessness of Boston drivers, the issue was not the recovery of the affect of anger, for he characteristically saw himself on the side of the angels. This permitted him not just to be angry but to be pleased with being angry. Were the therapist caught up in the recovery of affect or in the patient's reacting to the power of rules alone, he or she would miss the central thrust of the patient's concerns.

Thus, although each is constantly aware of the other, both therapist and patient juggle many other conscious thoughts and feelings. Often both are quite self-conscious and tense about what to say or not to

say next and about whether their responses are appropriate, reasonable, empathic, or kind. Yet because of their privacy and the establishment of working boundaries, each only has to deal with one partner, and the threshold of each is set for that interaction and no other. The potential appearance of a third party, listening or seeing, requires an adjustment of thresholds. I recognize that even in the most successful and comfortable of therapies, a degree of censorship takes place. One can become almost uncompromisingly frank, particularly in the terminal phase. By that time the patient knows the therapist well and realizes, "Hell, it is now or never, so let's get it out." And even then, there is a nuance in the relating of embarrassing feelings and in the extent to which small-mindedness and self-serving are tempered; a slight twist is given to an anecdote so that the glare of the painful reminiscence is softened and the furtive withholdings throughout the therapy are vaguely rationalized. The eye of the therapist has been preparing and has been being prepared for a long time for an unveiling. Slowly the patient has become largely convinced that the therapist does indeed accept all these thoughts and feelings as part, and often the best part, of what it is to be human. But what would be the effect of another eye?

THE IMPORTANCE OF UNDOING

The third element of private therapy, although it may not be so extensive as the first two, and it is certainly harder to explain, still feels real enough to be treated as a separate item. During every therapy session either the therapist or the patient goes off on a trail, sometimes with sincerity and conviction, and possibly on the patient's part deliberately, that eventually turns out to be false. Such digressions may well present greater difficulties for the therapist than for the patient. They may, in fact, be part of what he or she feels will be exposed if the therapy is recorded and the capacity to undo the digression is interfered with by potential observers.

Within the subtle boundaries worked out in the one-to-one relationship, it is of course possible to take back such actions. For example, it was painful for one of my patients to admit that the parents she had repeatedly praised for their devotion to and sacrifices for her were really a secret source of humiliation and irritation. Presenting them in a good light meant presenting herself in a good light, which matches the findings mentioned earlier (17). Her acts of misleading them as to her activities so that they would miss a public event where they would have met her colleagues were sources both of guilt and of secret satisfaction. This undoing, which was lacerating the patient, was possible within the context of her awareness that the therapist had put little stake in her total devotion. Her pleasure in her "bad" treatment of her parents, as opposed to the simple admission of the mixed feelings alleviated by the virtue of guilt, is the sort of response

made easier by the sense of complete privacy within the therapeutic situation.

Such undoing is harder for the therapist than for the patient. Although the therapist is no mirror, he or she is, for the comfort of both parties, invulnerable in a psychological sense. The patient can say wounding, hurtful things or can express undying affection or gratitude without fear of reprisal or acceptance. Few things are more destructive to a therapy than the patient's perception that the therapist is weak in the sense that he or she takes the patient's feelings at face value and is directly affected by them. This capacity to remain relatively objective by no means represents infallibility. A therapist who never says anything wrong is not doing enough. But there are levels of undoing, and some are harder to achieve than others. It is relatively easy for the therapist to acknowledge having misunderstood this or that remark or having missed the implications or importance of this or that interaction. It happens all the time, and, particularly if the therapist eventually picks up the misunderstanding, it is easy for him or her to acknowledge fallibility.

But other interactions require a deeper sense of comfort to acknowledge, a comfort that might be harder to come by if the interaction were down "in black and white" for all to see or hear. Oddly enough, it is my impression that the sorts of doing which require undoing, although ostensibly "mistaken," are often important for the therapy. They occur spontaneously, and if the therapist were monitoring himself or herself more carefully through fear of being "overheard," the absence of such mistakes could be a loss. Take the case of one patient who looked for rules to follow but was always anxious lest the very influence she sought might lead her in the wrong direction. The therapist heard this ambivalent search for direction everywhere but, within their rhythm, waited patiently for neat examples. One day he found one when asking about the careful writing down of a dream she wanted to report. It turned out that her current boyfriend's therapist had suggested that he write down his dreams. The therapist's mild question about how this jibed with her constantly reiterated concern about her spontaneity brought a torrent of annoyance: the dream itself was the important thing. After a time the therapist pointed out that it seemed as if she had found a rule to follow and then relied on it to an extent that made any questioning of it remarkably unnerving. So far so good—a not unusual therapeutic sequence and rhythm in their dance.

But then the patient took the lead with an attack on the therapy as a quicksand with no firm ground underfoot. Every time she found a foothold, a rule, or influence to follow, the therapist cut it away by his questioning. Thus, the therapy was making her feel worse rather than better. This, incidentally, was not an unusual sequence; it had occurred often in the past, and ordinarily by the next hour the intervening time enabled her to realize how hard she clung to influences and how mistrustful she was of them at the same time. But this time the therapist felt called upon to intervene, to use this moment to make the clarification about influence more convincing. He noted that her response to the question about spontaneity showed how reliant she was on the various directions she gleaned, how alert she was to such gleanings, and how much she hoped that this process, which she experienced inside as pedestrian and tight, would somehow allow her to be spontaneous and free. He found other examples of that vicious circle, and even though he emphasized that all of it was based on her unreal sense of herself as directionless, the hour ended with the patient qu et and somewhat cowed.

The therapist realized by then that his reiteration of his point had been a mistake that would take considerable undoing. His clarifications were technically "correct," but the emphasis and the timing were atrocious. In subsequent hours he surmised that she had felt put down by their interchange and indicated that although that had not been his conscious ntent, her response was understandable. They worked on it from both sides. She acknowledged feeling put down but started at once to claim that as her problem. The therapist demurred and suggested that such a response was automatic and that she again was inhibiting her own considered thoughts about the situation. In effect, the discussion about the therapist's undoing furthered the process of studying their interaction—the transference—and allowed them to compare what went on between them concerning her fear of acknowledging her partner's errors. If those close to her erred, whom was she to follow?

To call that sort of mistake a countertransference error is undoubtedly correct. Excessive pride in the subtlety of the clarifications led to a defensive "counterattack" in the form of further "clarifications." I do not in any way defend such an interaction; and yet I think that such things happen in most, if not in all, therapies and that they can be undone if the therapist is aware enough to acknowledge the breakthrough of his or her own self-importance in whatever form it takes and to set about the undoing. Yet when such things occur between therapist and patient, they are curiously delicate—much more a part of the art than of the science of therapy—and they are intimate. The therapist acknowledges some of his or her own makedness but not by burdening the patient with a confession of personal problems or uncertainties. Rather, the therapist looks for the fine thread that weaves the experience back into the therapy without damaging the patient's sense of reality by any pretense that the therapist had not obtruded his or her personal business where it did not belong. Through the course of a therapy, the patient may end up knowing few of the details of a therapist's life—whether he or she has children, plays poker, goes to the movies, eats garlic, enjoys sex, votes Republican, or has money—but in a basic sense the patient does finally know the man himself (or the woman herself) very well. The qualities of ease, effusiveness, pettiness, rigidity, or generosity

are hard to conceal, but the process of revealing them is intimate and private.

SOCIAL INTIMACY AND THERAPEUTIC INTIMACY

In ordinary social relationships the function of privacy is to develop intimacy, to grant revelations that will deepen the relationship and make it unique. To a certain extent, privacy reduces the need for pretense. In any ordinary social effort to achieve intimacy, the existence of a microphone, camera, or observer would change how the participants conduct themselves. Often when the wish for privacy is discussed, the first thing people think of is sex. Although such acts are for most people supremely private ones that would certainly change character if they were observed, the development of most close relationships, even those which are not overtly sexual, requires times of privacy when what is transmitted and experienced belongs exclusively to the participants. The development of most friendships would be changed by the addition of a third party.

I am not saying that the privacy which is necessary for certain kinds of intimacy always leads to total revelation. Far from it. The only person with whom one needs to be completely frank is oneself and, if one is lucky, one's therapist; for frankness is a crucial part of the therapeutic process. In other relationships, no matter how close, issues of tact, gentleness, and the hope that the relationship will last make barriers not only necessary but advisable.

Often patients want to believe that the unusual intimacy and the tolerance of it that are worked out in a therapeutic relationship are in themselves directly transferable to social situations as opposed to the transfer of what has been learned in the therapeutic relationship about self-deceit. It is important to remember, however, when thinking about frankness as opposed to inner honesty, that people's reactions in ordinary social situations are very delicate and that feelings are easily wounded. People who say, "Well, I decided to be honest with you," or, "I am always honest with you," are invariably not being honest with themselves. Rather than wanting to establish a higher level of openness, they may actually want to hurt the other person or to relieve their own anxiety about keeping things secret. The privacy that is exercised in establishing the usual social relationship serves the function of establishing the relationship for its own sake. There is a kind of ethic of confidentiality in it, although in this day of published diaries and reminiscences, the guarantees of confidentiality are small even when the trust is great.

Schwartz (25) pertinently points out that the invasion of various degrees of privacy can be a privilege, a duty, or a transgression and that this depends on the nature of the bond between two people. I would add that social standards which are changeable also determine what is considered an invasion of privacy—

perhaps the point of this paper. Obviously, people want all kinds of things, concrete and abstract, from relationships, but those are aspects which grow out of the relationship itself. The therapeutic relationship has a more precise function and goal. The remarkable level of intimacy that can be established within that work setting is what makes it so vulnerable to prying.

More often than not, when the therapist has made it clear that something the patient feels embarrassed or guilty about is understandable because, like everything else, it is human, the patient will complain that he or she must buy this level of friendship or understanding. Occasionally, if the patient is particularly bitter or depressed, he or she will compare the therapeutic relationship to one with a prostitute: 50 minutes of solace for a fee. At those moments the patient has pushed aside the goal of unraveling his or her own self-deceits and is pretending that the relationship is like others, that is, that it exists for its own sake or for a concrete social purpose and not for the revealing of the highways and byways of psychic functioning. Certainly, friends can at times be objective and put their objectivity at one's disposal, but someone who is always objective and always thinking about how to put that objectivity to use would be a strange and uncomfortable friend. As James Thurber (27) once said,

> Four is a party; Three is a crowd; Two is company; And one is a wanderer.

A therapist may not be good company, but certainly he or she is not a crowd.

REFERENCES

- Zinberg NE: The private versus the public psychiatric interview. Am J Psychiatry 1985; 142:889–894
- Gill MM, Simon J, Fink G, et al: Studies in audio-recorded psychoanalysis. J Am Psychoanal Assoc 1968; 16:230–244
- Haggard EA, Hiken JR, Isaacs KS: Some effects of recording and filming on the psychotherapeutic process. Psychiatry 1965; 28:169-191
- Shakow D: The recorded psychoanalytic interview as an objective approach to research in psychoanalysis. Psychoanal Q 1960; 29:82–97
- Wallerstein RS, Sampson H: Issues in research in the psychoanalytic process. Int J Psychoanal 1971; 52:11-50
- Offenkrantz W, Tobin A: Problems of the therapeutic alliance: analysis with simultaneous therapeutic and research goals. Int Rev Psychoanal 1978; 5:217-230
- Freud S: Recommendations to physicians practising psychoanalysis (1912), in Complete Psychological Works, standard ed, vol 12. London, Hogarth Press, 1958
- 8. Gill MM: Analysis of Transference, vol I: Theory and Technique. New York, International Universities Press, 1982
- Gill MM, Hoffman IZ: Analysis of Transference, vol II: Studies of Nine Audio-Recorded Psychoanalytic Sessions. New York, International Universities Press, 1982
- Gill M, Newman R, Redlich FD: The Initial Interview in Psychiatric Practice. New York, International Universities Press, 1954
- 11. Bergman P: An experiment in filmed psychotherapy, in Methods of Research in Psychotherapy. Edited by Gottschalk LA,

- Auerbach AH. New York, Appleton-Century-Crofts, 1966
- 12. Carmichael HT: Sound-film recording of psychoanalytic therapy: a therapist's experiences and reactions. Ibid
- 13. Lamb R, Mahl GF: Manifest reactions of patients and interviewers to the use of sound recording in the psychiatric interview. Am J Psychiatry 1956; 112:731-737
- Sternberg RS, Chapman J, Shakow D: Psychotherapy research and the problem of intrusions on privacy. Psychiatry 1958; 21: 195-203
- Gelso CJ: Effect of audiorecording and videorecording on client satisfaction and self-expression. J Consult Clin Psychol 1973; 40:455-461
- Gelso CJ, Tanney MF: Client personality as a mediator of the effects of recording. Counselor Education and Supervision 1972; 12:109–114
- 17. Roberts RR, Renzaglia GA: The influence of tape recording on counseling. J Counseling Psychol 1965; 12:10-16
- Tanney MF, Gelso CJ: Effect of recording on clients. J Counseling Psychol 1972; 19:348–350
- 19. Van Atta RE: Excitatory and inhibitory effect of various

- methods of observation in counseling. J Counseling Psychol 1969; 16:433-439
- Shaderowsky L: Live patient interviews at Columbia: a missed opportunity in psychoanalytic research. Bull Assoc Psychoanal Med 1983; 22:35–44
- Simmel G: The Sociology of Georg Simmel. Edited by Wolff K. New York, Free Press, 1950
- Rustin M: The social organization of secrets: towards a sociology of psychoanalysis. Int Rev Psychoanal 1985; 12:143–159
- McGinley P: A lost privilege, in Province of the Heart. New York, Viking Press, 1959
- Schuster EA: Privacy, the patient and hospitalization. Soc Sci Med 1976; 10:245–248
- Schwartz B: The social psychology of privacy. Am J Sociol 1968; 73:741–749
- Hartmann H: Ego Psychology and the Problems of Adaptation (1939). Translated by Rapaport D. New York, International Universities Press, 1958
- Thurber J: The Middle Aged Man on the Flying Trapeze. New York, Grosset & Dunlap, 1935

A Critical Discussion of DSM-III Dysthymic Disorder

James H. Kocsis, M.D., and Allen J. Frances, M.D.

The authors review the history of the concept of dysthymia and the literature on the epidemiology, course, and treatment of chronic depression. They present a critical discussion of DSM-III and DSM-III-R criteria for dysthymic disorder. On the basis of this review, they suggest that future revisions of the nomenclature include further subcategorization of chronic depressive disorders and that the term "dysthymic disorder" be reserved for chronic depressive disorders with an insidious onset at an early age. The relationships between dysthymic disorders and personality disorders and the response of subcategories of chronic depression to different treatment modalities need to be researched.

(Am J Psychiatry 1987; 144:1534-1542)

The depressive temperament is characterized by a permanent gloomy emotional stress in all the experiences of life.

-Emil Kraepelin (1, p. 118)

A mong the several categories that were introduced by APA in DSM-III, dysthymic disorder was one of the most controversial, probably because it represented quite a radical departure from previous nosological convention. In DSM-II, chronic states of depression had been subsumed under cyclothymic personality or depressive neurosis and were classified within the personality disorders and neuroses sections. DSM-III relabeled chronic depressions with the new designation of dysthymic disorder and classified them within the affective disorders section. The changes in name and in category of assignment were in the spirit of DSM-III's tendency to broaden the inclusiveness of the affective disorders section and reflected the notion that dysthymic disorder represents a mild, chronic form of depression on a spectrum with the more florid and acute manifestations of affective disorders. The creation of the category of dysthymic disorder was based on very limited empirical evidence (as was the

Received April 28, 1986; revised Sept. 23, 1986; accepted Nov. 3, 1986. From the Department of Psychiatry, New York Hospital-Cornell Medical Center. Address reprint requests to Dr. Kocsis, Department of Psychiatry, New York Hospital-Cornell Medical Center, 525 East 68th St., New York, NY 10021.

Supported in part by NIMH grant MH-37103. Copyright © 1987 American Psychiatric Association.

choice of its specific diagnostic criteria), but the new system had the virtue of attempting to distinguish chronic minor from acute major depression and has stimulated research to determine the descriptive characteristics and treatment response of chronic depression.

The revised version of DSM-III (DSM-III-R) provides an opportunity to reassess the status of chronic depression and of methods of classifying it. There is accumulating evidence that chronic depressions are commonly encountered in both clinical and community samples and that they deserve increased diagnostic recognition and research attention. We participated in workshops on the definition of dysthymic disorder sponsored by the APA Work Group to Revise DSM-III and by the National Institute of Mental Health (NIMH). Some of our suggestions have been included in the new criteria set for dysthymia that appears in DSM-III-R. Other suggestions were not accepted. In this paper we will review the history of the concept of dysthymic disorder and the empirical data that have accumulated on chronic depression. We will discuss problems in the DSM-III definition of dysthymic disorder and the rationale for the changes in the criteria set for dysthymia that appear in DSM-III-R and will offer suggestions for possible future redefinitions and research directions.

HISTORICAL BACKGROUND

In his classic volume Manic-Depressive Insanity and Paranoia (1), Kraepelin gave a rich clinical description of patients with chronic depressive tendencies. He termed this condition "depressive temperament" and considered it "a rudiment" of fully developed manicdepressive insanity. As evidence for this spectrum concept, Kraepelin pointed out similarities in clinical characteristics between depressive temperament and episodic full-blown depression; the latter presented with acute symptoms that were more severe and flamboyant. He also reported that 12.1% of his manicdepressive patients had had a premorbid depressive temperament. The view that mild chronic states of depression represent attenuated variants of typical manic-depressive illness continued as a theme in classical European psychiatry. Kretschmer (2) described dysthymia and cyclothymia as "in the first place in the prepsychotic personalities of the psychopaths [meaning manic-depressive patients] themselves and then in their nearest blood-relations." Slater and Roth (3) suggested that the true association between dysthymia and manic-depressive illness could be seen by the occasional dramatic improvement of patients with dysthymic disorder when they received convulsive therapies.

Schneider (4) viewed "depressive psychopathy" as having a constitutional etiology, by which he meant a combination of hereditary, neonatal, and early environmental influences. He pointed out a tendency for "psychopathies" (personality disorders) to fluctuate with the life cycle and to be modifiable with psychotherapy. He saw them as on a spectrum with normal personality traits and types and not related to the affective disorders.

Until recently, American psychiatry has been under the predominant influence of psychodynamic schools of thought, which have viewed chronic depressive and dysthymic states as character neuroses with an etiology embedded in early environmental influences. "Oral dependency," "object hunger," "superego pathology," and "pathological narcissism" have been described as character developments in such individuals, which have left them vulnerable to intermittent or chronic bouts of depressed mood and associated dysthymic symptoms (5-7). In DSM-II, manic-depressive disorder and other affective states were classified as psychotic disorders, whereas chronic and mild forms of depression were considered to belong to the neuroses and personality disorders. Thus, chronically dysthymic patients might have been diagnosed as having a subtype of cyclothymic or asthenic personality disorder or as having neurasthenic or depressive neuroses. These diagnostic concepts derived from the confluence of American psychoanalytic thinking and the influence of the International Classification of Diseases, which bore the stamp of Schneiderian thought.

In a subsequent classification of depressive states proposed in 1975 by Schildkraut and Klein (8), "chronic characterological depressive syndromes" was a term used to designate chronic depressions that were "an inherent part of a lifelong personality problem." These authors stated that a specific type of character pathology was not essential for the diagnosis but that a particular constellation of symptoms and mood reactivity to environmental or interpersonal events was characteristic. They also described pharmacological responsiveness in some subtypes of chronic characterological depression. The same authors delineated a second variant of chronic depression, "demoralization," which referred to patients who showed persistent dysphoria in the face of chronic unresolved realistic life problems, including physical or mental illness.

More recent systems for classifying psychiatric disorders have used descriptive (so-called atheoretical) terms for classification of the chronic, "minor" depressions—e.g., "intermittent depression" in the Research Diagnostic Criteria (RDC) of Spitzer et al. (9) and "dysthymic disorder" in DSM-III. However, as has

been previously pointed out by one of us (A.J.F.) (10), inclusion of these disorders in the affective disorder sections of these classifications represents an important theoretical shift and a reconceptualization of their etiology, pathogenesis, and treatment.

Implicit in this brief review of the history of the classification of chronic depression and dysthymic states is that they have been viewed variously as inherited temperaments, acquired character endencies, attenuated variants of classical manic-depressive disorders, or complications of other mental disorders, physical illnesses, or environmental stressors. We will now review the literature relevant to putative associations between chronic states of depression and other conditions, including studies of epidemiology, clinical characteristics, relationship to personality disorders, and response to antidepressant medication.

LITERATURE REVIEW

Epidemiology of Chronic Depression

Two epidemiologic studies (11, 12) have investigated the prevalence of chronic depression in randomly selected community population samples. Weissman and Myers (11) found a 4.5% prevalence of intermittent depression (the RDC term for chronic depression) in a study conducted in New Haven. The vast majority (87.5%) of subjects with intermittent depression were found to have one or more additional RDC diagnoses, but these were not subclassified into affective versus nonaffective categories.

The NIMH Epidemiologic Catchment Area study (12) reported on prevalences of various DSM-I/I diagnostic categories based on interviews conducted in random population samples in three sites. The rates for dysthymia ranged from 2.1% to 3.8%. Prevalences of dysthymia in women ranged from 2.9% to 5.4% and were significantly higher than in men in two of the three sites. The study methodology did not provide for reporting data relevant to possible further subtyping of chronic depression (e.g., "double depression," chronic major depression, and secondary chronic depression). All chronically depressed patients (i.e., those who had been depressed for more than 2 years) were classified as having dysthymic disorder in this study regardless of how severe their current depression or its duration and type of onset (D. Regier, personal communication).

Chronic depression appears to be extremely common among patients presenting to psychiatric settings for treatment of depression. Rates of 25% (13) and 36% (14) have been reported in two studies that evaluated patients retrospectively using the RDC. High prevalences of chronicity have also been reported in prospective long-term outcome studies conducted with depressed patients. Working with a predominantly inpatient sample, Keller et al. (15) reported that 31% of patients with major depression had not recovered after 2 years. In this study the sample was subdivided

according to presence or absence of preexisting intermittent depression, and the patients having both chronic intermittent depression and acute major depression were diagnosed as having "double depression." When the subgroup with "double depression" was examined separately after 2 years, 88% had recovered from the superimposed major depression but only 31% had also recovered from the chronic intermittent or minor depression.

Weissman and Klerman (16) reviewed 11 follow-up studies of patients treated for depression and found that 15%–20% of patients were reported to experience incomplete recovery and to show some intermittent fluctuating and chronic symptoms, often for years. Prospective studies conducted with both inpatients and outpatients (7, 17, 18) support such figures.

In a study of children referred for treatment of mood disorders, Kovacs at al. (19, 20) reported that 43% of 65 subjects had a history of dysthymic disorder (defined as a duration of at least 1 year in children). Furthermore, among children who initially presented with a dysthymic disorder, recovery was found to be slow, and the median duration was 3½ years. Seventy percent of these children experienced at least one episode of major depression over a 7-year follow-up period. This study is especially interesting because it provides prospective validation of retrospective reports from adult patients that the onset of their chronic depression began in childhood or before they could remember (21, 22).

It appears that dysthymic disorder may be commonly associated with other medical and psychiatric diagnoses, although interpretation of such associations is complicated by problems of definitional overlap. Thus, anger or irritability, insomnia, and anxiety constitute criteria for a variety of medical or psychiatric diagnoses, including dysthymic disorder. For example, a study by Tan et al. (23) reported a 45% prevalence of dysthymic disorder in a sample of patients presenting for treatment of chronic insomnia.

Clinical Characteristics of Chronic Depression

RDC and DSM-III represent an important departure from other recent nosological systems and a return to a Kraepelinian notion that the course of a psychiatric disorder can be of considerable clinical importance in classification. Thus, these new diagnostic classifications provide separate categories for chronic and acute states of depression (intermittent depression in RDC and dysthymic disorder in DSM-III). Because of the early and insidious onset of chronic depression, most clinical and research diagnostic evaluations of the course of this illness are based solely on patient self-reports. If the onset and course of a disorder are important to clinical classification, it follows that such self-reported data must be reasonably reliable and valid. We and other clinical researchers interested in chronic depression have wondered whether depressed patients who report chronicity are influenced by negative retrospective biases, which would be consistent with other pessimistic cognitive distortions occurring in depression (24). We currently have a study in progress to test the reliability of patient self-reports of chronic depressive symptoms by conducting a second structured diagnostic interview after patients have recovered from their depression. Furthermore, we are attempting to assess the validity of the history given by patients by interviewing close relatives or friends.

Two studies investigating aspects of patients' selfreports of the longitudinal course of depression (25, 26) support their reliability and validity. Kandel and Davies (25) interviewed adolescents at age 15-16 and then performed a follow-up after 9 years. They found that depressive symptoms were relatively stable over time and that individuals reporting symptoms as adolescents were the most likely to do so as young adults. Furthermore, depression scores in adolescence were the most powerful predictors in a multiple regression for depressive symptoms in young adulthood. Billings and Moos (26) compared agreement in reports of family environment, stressors, and resources of patients with acute and chronic unipolar depression and their spouses with agreement in reports of a control group of nondepressed husbands and wives. There was as much agreement in the experimental as in the control group. These authors concluded that negative perceptual bias on the part of the patient did not appear to account for the excess of negative events in depressed families. Although much work remains to be done to resolve questions about the value of selfreported historical data in chronic depression, the available research lends credence to the possibility of reliable and valid information.

Three investigations have evaluated course of illness in samples of patients having chronic depression (15, 21, 22). Keller et al. (15) reported on 80 patients with "double depression." Fifty-five percent of these reported chronic depression before the first episode of major depression, and 41% reported onset with a clear-cut episode of major depression. Forty-eight percent of the patients reported onset before the age of 26, and 50% said they had been depressed for more than 10 years. The relationship between age at onset and type of onset was not specified in this report.

Akiskal et al. (22) studied 137 outpatients with chronic depressions. They subdivided these patients into three groups according to the course of illness. One group (28%) consisted of patients who developed chronic depression following clear-cut episodes of major depression in middle or late life. A second group (36%) developed chronic depressions as complications of other psychiatric or chronic medical illness. The third group of so-called characterological depressions consisted of patients with "intermittent subsyndromal depression" with insidious onset in childhood or adolescence and constituted 37% of the overall sample. Approximately one-third of this last group had had periods of major depression superimposed on their

chronic mild depression, a complication that was associated with a more favorable response to antidepressant medication (27).

We have recently examined the course of illness in a sample of 39 outpatients who presented with complaints of chronic depression for longer than 2 years (21). Type of onset was rated by using the Newcastle scale (28), and a structured clinical interview was administered to determine age at onset, duration of illness, and course of illness. Ninety-seven percent of these patients reported an insidious or indistinct onset of their depressive symptoms, 65% reported onset before age 25, and 50% stated that their depression had been present for more than 10 years. Because 95% of our subjects fulfilled DSM-III criteria for major depression plus dysthymic disorder on their admission to the study, we undertook systematic evaluations of the duration of individual depressive symptoms in a subsample of our study cohort. We found that 60% of those examined reported sufficient persistent symptoms to meet criteria for major depression continuously for longer than 2 years, while the other 40% reported substantial increments in their symptoms within the past 6 months, i.e., "double depression."
In summary, although questions remain about the

reliability and validity of self-report histories of patients with chronic depression, there is preliminary research indicating that the information given is meaningful. The studies conducted thus far suggest that one subtype of chronic depression has an early, insidious onset followed by a course that may or may not progress to intermittent or chronic depression of major proportions. A second type of intermittent or chronic depression may develop after an acute major depression, often at a later age. A third type appears to be chronic depression in association with other axis I or axis II psychopathology, chronic medical disorder, or chronic stress. More investigation will be necessary to clarify the cause of illness in these proposed subtypes, and much work remains to be done to determine nosologic and treatment implications of these varia-

Relationship Between Dysthymic and Personality Disorders

Clinicians have long been curious about the nature of the relationship between chronic depression and character pathology (1, 2, 4, 7, 8). Because personality disorders and dysthymic disorders often have a similar course and share common symptoms or traits, it is intuitively reasonable to study the association between these two types of disorders. DSM-III has suggested that dysthymic disorder may be particularly associated with certain personality disorders (borderline, histrionic, and dependent). Similarly, Akiskal et al. (27) have reported an excess of "unstable" personality traits (passive-dependent, histrionic, antisocial, or borderline) in characterological depressions unresponsive to antidepressant medications. Therefore, it is of inter-

est to investigate whether certain personality disorders predispose to dysthymic disorder, whether personality disorders in general are more prevalent in dysthymic disorder than in other axis I disorders, and whether presence of a personality disorder affects response of dysthymic disorder to treatment with medication.

Empirical studies pertinent to these questions have been few and also hampered by methodologic problems. For example, most have been conducted as cross-sectional assessments and have failed to take into account that depressed mood itself may confound evaluations of personality disorder, as has been shown repeatedly for studies of personality disorder in acute depression (29, 30).

Several studies (31–33) have demonstrated lower recovery rates from acute depression and higher rates of chronicity when a coexistent personality disorder or "high neuroticism" is present in depressed patients. The hypothesis that preexisting personality disorder predisposes to chronicity in patients who enter an episode of major depression awaits prospective longitudinal investigation.

We have also searched for empirical data relevant to the questions of whether personality disorders exist more commonly in patients with dysthymic disorder than in patients with other axis I conditions and whether certain personality disorders are specifically associated with dysthymic disorders. Our own study (21) has now evaluated 54 outpatients with chronic depression, most of whom have fulfilled crite-ia for both dysthymic disorder and major depression; 41% were diagnosed by treating clinicians as having an axis II disorder, the most common being dependent (13%) and atypical, mixed (11%). Koenigsberg et al. (34) reported a 34% rate of axis II diagnoses in a sample of 68 patients with dysthymic disorder; again, the most common types were atypical, mixed (16%) and lependent (8%).

The question of whether axis II diagnoses are more prevalent in chronic depression than in acute major depression and other axis I disorders has been addressed by studies that have provided rates of axis II conditions in other disorders. For example, Koenigsberg et al. (34) reported rates of axis II diagnoses of 23% for major depression, 50% for panic disorders, and 24% for generalized anxiety disorders. In two studies involving inpatients with major depression, rates of axis II diagnoses have been reported as 34% (32) and 53% (33). We have reported a 40% rate of axis II diagnoses in outpatients with acute major depression (21).

The currently available data are sparse but suggest that inpatients and outpatients having major depression are diagnosed as having an axis II disorder at approximately the same rate as are patients who have dysthymic disorder or "double depression" and that dependent and mixed personality disorders may be the most commonly diagnosed personality disorders in states of chronic depression. Although considerable evidence (31–33) suggests that the presence of a per-

sonality disorder impairs response to antidepressant medication among patients who are acutely depressed, to date no systematic data pertinent to this important clinical question have been reported in samples of patients with dysthymic disorder or other chronic depressive conditions.

Antidepressant Medication Treatment of Chronic Depression

Several reports have appeared suggesting that chronic depression is responsive to different antidepressant medications, but diagnostic criteria for entry into these studies have varied considerably. To our knowledge, only our own ongoing study (35) selected patients for chronicity and used a placebo control group.

Ward et al. (36) treated 15 patients, all of whom met the RDC for major depressive disorder with a duration longer than a year, for 4 weeks with doxepin. Eleven patients had been depressed for more than 2 years and three for more than 10 years. Eighty percent showed marked or moderate improvement according to the Clinical Global Impression scale during this open trial of treatment.

In a double-blind comparison of amitriptyline, perphenazine, and a combination of these drugs for treatment of RDC major depression, Rounsaville et al. (14) included 23 patients who had an additional diagnosis of intermittent depression. Although no figures were given for responses to the three treatments separately, the overall response for patients with major depression plus intermittent depression was comparable to the response of those with major depression alone.

Akiskal et al. (27) treated 50 outpatients with "characterological" depression (chronic, mild, insidious-onset depression) with a variety of antidepressant medications prescribed on an open basis in a clinical setting. Forty percent were considered to be favorable responders by "global clinical criteria."

Paykel et al. (37) administered phenelzine, amitriptyline, and placebo in a randomized, double-blind trial to 131 depressed outpatients. Fifty-six of these patients were considered to have "neurotic dysphoria," a diagnosis derived from concepts of Klein and Davis (38) meaning "a pattern of long-standing or recurrent depression, without clear differentiation of episodes from personality and with evidence suggesting depressive personality." Although both active drugs were superior to placebo in the overall sample, there was a tendency for the subgroup of patients with characterological depression to respond more poorly to phenelzine than to amitriptyline or placebo, which differed little in effectiveness from each other.

Preliminary results of our own ongoing doubleblind, placebo-controlled trial of imipramine for chronic depression (35) were reported in 1985. Thirty patients, all of whom fulfilled *DSM-III* criteria for both dysthymic disorder and major depression, completed the 6-week treatment. Favorable response was defined strictly as a 24-item Hamilton Rating Scale for Depression total score less than 7 plus reduction of dysthymic symptoms such that the patient no longer met criteria for dysthymic disorder by the end of treatment. Fifty-five percent of imipramine-treated and 14% of placebo-treated subjects achieved this level of recovery (p<.05 by Fisher's exact test). These results are particularly interesting in view of the fact that the vast majority of subjects had had previous extensive psychotherapy. Furthermore, in a "naturalistic" follow-up study of 80 patients with "double depression," Keller et al. (15) reported that only 6% had recovered from major depression plus dysthymic disorder after 8 weeks. This rate is similar to our own 14% response rate following 8 weeks of placebo. Thus, it appears that active antidepressant medication prescribed in adequate doses for an adequate period of time may offer at least short-term relief for both the acute and the chronic symptoms of depression in a substantial percentage of patients.

In conclusion, this review of treatment studies suggests that chronically depressed patients may be helped by antidepressant medications. It seems likely that future treatment studies of chronic depression can be enhanced by discriminating subgroups according to the interaction of severity and course—e.g., chronically "minor," chronically "major," or "double" (acute major superimposed on chronic mild). Other factors that may have an important bearing on response to antidepressant medications (such as age at and type of onset, presence of other axis I or axis II diagnoses, medical illness, and level of stress) will also have to be evaluated in these subgroups of chronic depression.

DIAGNOSTIC CRITERIA FOR DYSTHYMIC DISORDER

Problems With DSM-III Dysthymic Disorder

Appendix 1 lists the DSM-III diagnostic criteria for dysthymic disorder. The accompanying DSM-III text describing dysthymic disorder suggests that such patients often present with an associated personality disorder; an onset that usually begins early in adult life but may occur in childhood or adolescence or later in adult life (in some cases following a major depression); an onset that is usually insidious and a course that is chronic; and predisposing factors that include chronic physical disorder, chronic psychosocial stressors, and another axis I or axis II disorder that "does not completely remit and merges imperceptibly into this condition." The several problems and inadequacies of the DSM-III definition of dysthymic disorder can be taken up separately under the headings of severity, age at onset, type of onset, and relationship to axis II.

Severity. Perhaps the most important problem in the DSM-III definition of dysthymic disorder is that its

severity criterion is so very close to the threshold established for major depression. To meet the severity criterion for dysthymic disorder, the presence of at least three of 13 depressive symptoms is required, while for major depression it is necessary to have at least four of eight symptoms (note that six of the defining items for dysthymic disorder and major depression overlap; on the additional items, the dysthymic disorder list emphasizes cognitive symptoms. while the major depression list emphasizes somatic symptoms). A patient with dysthymic disorder who acquired just one more symptom would then meet the additional diagnosis of major depression. This lack of distinctiveness in the severity definition of dysthymic disorder and major depression may account for a high prevalence of so-called double depression (13, 15). Patients with dysthymic disorder who become only slightly more or slightly less depressed may with each small change in symptoms just make or just miss the criterion level for major depression. The consequences of having virtually identical severity criteria for dysthymic disorder and major depression have been obvious in our own study (21), in which almost all patients with chronic depression also met the severity criteria for major depression. An essential element of the construct of dysthymic disorder is that it describes a chronic subsyndromal level of depression. If all or most patients with dysthymic disorder also meet criteria for chronic major depression or "double depression," one might just as well use the terms "chronic" and/or "double" as modifiers describing different possible courses for major depression—no separate category for dysthymic disorder would be needed. If dysthymic disorder is to remain a separate category, its severity threshold must be more distinctly differentiated from major depression—either by lowering the threshold for dysthymic disorder or by raising the threshold for major depression or, preferably, by instituting both of these changes.

Age at onset. The DSM-III criteria set for dysthymic disorder does not specify anything about age at onset. It requires only that symptoms be present for 2 years in adults (or 1 year in children). The resulting DSM-III definition for dysthymic disorder thus lumps together in one diagnostic category those chronic depressions which have an onset early in life (usually without clear-cut precipitants) and those which begin later in life (often following in the wake of major depression, another psychiatric disorder, a chronic medical disorder, or chronic stress). Other authors (39) have suggested, and we agree, that it may be of value to distinguish early-onset ("lifelong") depressions which have the same onset and time course as the personality disorders from those chronic depressions which follow unresolved major depression or appear to be secondary to major psychiatric or medical conditions or to demoralization in reaction to chronic stress. The DSM-III definition of dysthymic disorder muddles these potentially important distinctions.

Type of onset. The DSM-III definition of dysthymic

disorder also fails to distinguish the type of onset that often characterizes chronic as opposed to acute depressions. The available literature (7) and our own data suggest that early-onset chronic depressions tend to have an insidious onset in contrast to typical episodic major depression, which is likely to have a fairly clear-cut and recognizable onset. This distinction has been supported by factor-analytic studies on depression (28) and has been included in the Newcastle scale to distinguish endogenous from reactive depression, but it does not inform the DSM-III definition of dysthymic disorder.

Relationship to personality disorders. The DSM-III placement of dysthymic disorder with the axis I affective disorders rather than with the axis II personality disorders was controversial because it seemed to provide premature closure on the question of whether and when such conditions represent a spectrum of affective disorders or a spectrum of character pathology or, more likely, whether dysthymic disorder is a heterogeneous category including both sorts of patients. The major saving grace of DSM-III in this regard is the provision of axis II on which to rate concurrent personality disorders. This provides an opportunity to determine whether the comorbidity of an axis Il diagnosis and dysthymic disorder predicts differences in course, onset, and treatment responses. Of course, the uncontaminated assessment of personality disorder in the presence of a concurrent chronic affective disorder presents difficult, perhaps insoluble, technical problems.

In summary, then, the DSM-III definition of dysthymic disorder fails to distinguish early- and insidious-onset chronic depressions ("I have been depressed all of my life") from those which appear to be secondary to psychiatric or medical illness or unhappy life situations. The major distinction in DSM-III between dysthymic disorder and major depression rests on the severity of depression, and the difference between the syndromes is just one symptom. The DSM-III definition of dysthymic disorder, therefore, provides insufficient specificity for the different types of chronic depression and insufficient distinction between dysthymic disorder and major depression.

The DSM-III-R Definition and Suggested Changes

The DSM-III-R list of diagnostic criteria for dysthymia is presented in appendix 2. One change from DSM-III is in the severity criteria. Whereas DSM-III required the presence of three of 13 depressive symptoms for the diagnosis of dysthymic disorder, the new criteria for dysthymia require only two of six. The criteria for a major depressive episode in DSM-III-R are essentially unchanged and, aside from depressed mood, require the presence of at least five of nine symptoms of depression. Although it remains unclear whether DSM-III-R has adjusted upward or downward the severity requirement for dysthymia, the addition of just one depressive symptom will no longer

result in a patient with dysthymia also meeting criteria for major depression. This may serve to increase the distinctiveness of dysthymia and major depression and reduce the likelihood of an artifactually elevated rate of "double depression."

The second major change in the DSM-III-R definition of dysthymia is the exclusion (in criterion D) of those patients whose chronic depression began with an episode of major depression. Such patients will now be classified as having a chronic form of major depression characterized by "two consecutive years without a period of two months or longer during which there were no significant depressive symptoms." This change has the virtue of reducing the heterogeneity of the dysthymia construct by removing from it that relatively clearly defined group of patients whose chronic depression appears to be the result of an unresolved but otherwise typical major depression.

Another major innovation in the way DSM-III-R handles chronic depression is its provision of two methods of subtyping dysthymia: primary versus secondary and early versus late onset. Primary dysthymia occurs independent of another chronic axis I or axis III condition. The early-onset type of dysthymia refers to those patients whose symptoms began before age 21. DSM-III-R also introduces into axis IV the distinction as to whether related stressors are acute or enduring. This should assist in identifying those dysthymic disorders which are related to chronic stressors. Thus, in summary, DSM-III-R reduces the heterogeneity of chronic depression by allowing it to be categorized in a variety of different ways: 1) as a residual syndrome following major depression, 2) primary versus secondary, 3) with an early versus a late onset, 4) related to chronic severe stress, 5) with or without an accompanying personality disorder diagnosis on axis II, and 6) with or without an accompanying major medical disorder labeled on axis III.

The changes included in DSM-III-R are definite improvments on DSM-III, but several additional changes deserve further consideration and testing. Perhaps the biggest remaining problem is the continued lack of distinction between the severity thresholds for dysthymia and major depression. The DSM-III-R criteria for dysthymia require the presence of depressed mood and two of six associated symptoms, while major depression requires depressed mood and five of nine symptoms. It remains too easy to go from a diagnosis of dysthymia to one of major depression by merely adding two symptoms and thus creating an artifactually high prevalence of "double depression." There was some discussion of increasing the severity criteria for major depression for this and for other reasons—major depression seems too easy a diagnosis to meet in clinical and nonclinical settings. However, such adjustment upward of the major depression severity threshold will have to await reconsideration for DSM-IV.

A second concern we have about the DSM-III-R criteria for dysthymia is that the new listing of associ-

ated symptoms appears to be overly weighted toward somatic and vegetative symptoms. In our own sample of 21 patients (unpublished data), the most common chronic depressive symptoms (present for 2 or more years) were depressed mood (100%), low energy (81%), decreased self-esteem (81%), psychic anxiety (62%), inappropriate guilt (62%), decreased interests and productivity (57%), decreased effectiveness (52%), pessimism (52%), and tearfulness (52%). As can be seen from reviewing appendixes 1 and 2, appetite disturbance has been added to the new listing and self-deprecation, decreased effectiveness, social withdrawal, loss of interest and pleasure, irritability, decreased talkativeness, and tearfulness have been removed. Our clinical and research experience has led us to the conclusion that the cognitive and functional symptoms are most characteristic of dysthymic disorder, and we would favor retention of a broader list of possible associated symptoms.

CONCLUSIONS

It is important to note that research in affective disorders has traditionally focused on acute major depressive disorders treated with relatively short-term interventions and studied with cross-sectional probes. In drug studies, chronicity usually either has not been evaluated systematically or has served as a criterion for exclusion. Thus, the subtyping of chronic depression (by descriptive characteristics, course, family loading, biological tests, and treatment response) has only recently been subjected to investigation. The newly introduced DSM-III category of dysthymic disorder was heterogeneous and nonspecific. The refinements incorporated into DSM-III-R should be an improvement in this regard. Future nomenclatures will likely include subtypes of chronic depression that are nonhomogeneous in etiology, pathogenesis, and treatment response.

REFERENCES

- Kraepelin E: Manic-Depressive Insanity and Paranoia. Translated by Barclay RM; edited by Robertson GM. Edinburgh, E & S Livingstone, 1921
- Kretschmer E: Physique and Character. New York, Harcourt, Brace, 1925, pp 122–145
- Slater E, Roth M: Clinical Psychiatry, 3rd ed. Baltimore, Williams & Wilkins, 1969
- Schneider K: Clinical Psychopathology. New York, Grune & Stratton, 1959, pp 15–37
- Fenichel O: The Psychoanalytic Theory of Neurosis. New York, WW Norton, 1945
- Gaylin W (ed): The Meaning of Despair. New York, Science House, 1968
- Akiskal HS, Bitar AH, Puzantian VR, et al: The nosological status of neurotic depression. Arch Gen Psychiatry 1978; 35: 756-766
- Schildkraut JJ, Klein DF: The classification and treatment of depressive disorder, in Manual of Psychiatric Therapeutics. Edited by Shader RI. Boston, Little, Brown, 1975

- Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria (RDC) for a Selected Group of Functional Disorders, 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1978
- Frances AJ: The DSM-III personality disorders section: a commentary. Am J Psychiatry 1980; 137:1050-1054
- 11. Weissman MM, Myers JK: Affective disorders in a US urban community. Arch Gen Psychiatry 1978; 35:1304–1311
- Robins LN, Helzer JE, Weissman MM, et al: Lifetime prevalence of specific psychiatric disorders in three sites. Arch Gen Psychiatry 1984; 41:949–958
- 13. Keller MB, Shapiro RW: "Double depression": superimposition of acute depressive episodes on chronic depressive disorders. Am J Psychiatry 1982; 139:438-442
- Rounsaville BJ, Sholomskas D, Prusoff BA: Chronic mood disorders in depressed outpatients. J Affective Disord 1980; 2: 73-88
- 15. Keller MB, Lavori PW, Endicott J, et al: "Double depression": two-year follow-up. Am J Psychiatry 1983; 140:689-694
- Weissman MM, Klerman GL: The chronic depressive in the community: under-recognized and poorly treated. Compr Psychiatry 1977; 18:523-531
- 17. Ceroni GB, Neri C, Pezzoli A: Chronicity in major depression: a naturalistic study. J Affective Disord 1984; 7:123-132
- 18. Bronisch T, Wittchen H, Krieg C, et al: Depressive neurosis. Acta Psychiatr Scand 1985; 71:237-248
- Kovacs M, Feinberg TL, Crouse-Novak MA, et al: Depressive disorders in childhood, I: a longitudinal prospective study of characteristics and recovery. Arch Gen Psychiatry 1984; 41: 229-237
- Kovacs M, Feinberg TL, Crouse-Novak MA, et al: Depressive disorders in childhood, Il: a longitudinal study of the risk for a subsequent major depression. Arch Gen Psychiatry 1984; 41: 643-649
- Kocsis JH, Voss C, Mann JJ, et al: Chronic depression: demographic and clinical characteristics. Psychopharmacol Bull 1986; 22:192–195
- Akiskal HS, King D, Rosenthal TL, et al: Chronic depressions, part 1: clinical and familial characteristics in 137 probands. J Affective Disord 1981; 3:297–315
- Tan T-L, Kales JD, Kales A, et al: Biopsychobehavioral correlates of insomnia, IV: diagnosis based on DSM-III. Am J Psychiatry 1984; 141:357–362
- Breslow R, Kocsis J, Belkin B: Contribution of the depressive personality to memory function in depression. Am J Psychiatry 1981; 138:227-230
- 25. Kandel DB, Davies M: Adult sequelae of adolescent depressive symptoms. Arch Gen Psychiatry 1986; 43:255-262
- Billings AG, Moos RH: Chronic and nonchronic unipolar depression: the differential role of environmental stressors and resources. J Nerv Ment Dis 1984; 172:65-75
- Akiskal HS, Rosenthal TL, Haykal RF et al: Characterologic depressions: clinical and sleep EEG findings separating "subaffective dysthymias" from "character spectrum disorders." Arch Gen Psychiatry 1980; 37:777-783
- Bech P: Rating scales for affective disorders. Acta Psychiatr Scand (Suppl) 1981; 295:11–101
- Hirschfeld RMA, Klerman GL, Clayton RJ, et al: Assessing personality: effects of the depressive state on trait measurement. Am J Psychiatry 1983; 140:695-699
- Liebowitz MR, Stallone F, Dunner DL, et al: Personality features of patients with primary affective disorder. Acta Psychiatr Scand 1979; 60:214–224
- Zuckerman DM, Prusoff BA, Weissman MM, et al: Personality as a predictor of psychotherapy and pharmacotherapy outcome for depressed patients. J Consult Clin Psychol 1980; 48:730– 735
- 32. Charney DS, Nelson JC, Quinlan DM: Personality traits and disorder in depression. Am J Psychiatry 1981; 138:1601-1604
- 33. Pfohl B, Stangle D, Zimmerman M: The implications of DSM-

- III personality disorders for patients with major depression. J Affective Disord 1984; 7:309-318
- Koenigsberg HW, Kaplan RD, Gilmore MM, et al: The relationship between syndrome and personality disorder in DSM-III: experience with 2,462 patients. Am J Psychiatry 1985; 142: 207-212
- Kocsis JH, Frances AJ, Mann JJ, et al: Imipramine for the treatment of chronic depression. Psychopharmacol Bull 1985; 21:698-700
- Ward NG, Bloom VL, Friedel RO: The effectiveness of tricyclic antidepressants in chronic depression. J Clin Psychiatry 1979; 40:49-52
- Paykel ES, Rowan PR, Parker RR, et al: Response to phenelzine and amitriptyline in subtypes of depressed outpatients. Arch Gen Psychiatry 1982; 39:1041-1049
- 38. Klein DF, Davis JM: Diagnosis and Drug Treatment of Psychiatric Disorders. Baltimore, Williams & Wilkins, 1969
- 39. Akiskal HS: Dysthymic disorder: psychopathology of proposed chronic depressive subtypes. Am J Psychiatry 1983; 140:11-20

APPENDIX 1. DSM-III Criteria for Dysthymic Disorder

- A. During the past two years (or one year for children and adolescents) the individual has been bothered most or all of the time by symptoms characteristic of the depressive syndrome but that are not of sufficient severity and duration to meet the criteria for a major depressive episode.
- B. The manifestations of the depressive syndrome may be relatively persistent or separated by periods of normal mood lasting a few days to a few weeks, but no more than a few months at a time.
- C. During the depressive periods there is either prominent depressed mood (e.g., sad, blue, down in the dumps, low) or marked loss of interest or pleasure in all, or almost all, usual activities and pastimes.
- D. During the depressive periods at least three of the following symptoms are present:
 - (1) insomnia or hypersomnia
 - (2) low energy level or chronic tiredness
 - (3) feelings of inadequacy, loss of self-esteem, or selfdeprecation
 - (4) decreased effectiveness or productivity at school, work, or home
 - (5) decreased attention, concentration, or ability to think clearly
 - (6) social withdrawal
 - (7) loss of interest in or enjoyment of pleasurable activities
 - (8) irritability or excessive anger (in children, expressed toward parents or caretakers)
 - (9) inability to respond with apparent pleasure to praise or rewards
 - (10) less active or talkative than usual, or feels slowed down or restless
 - (11) pessimistic attitude toward the future, brooding about past events, or feeling sorry for self
 - (12) tearfulness or crying
 - (13) recurrent thoughts of death or suicide
- E. Absence of psychotic features, such as delusions, hallucinations, or incoherence, or loosening of associations.
- F. If the disturbance is superimposed on a preexisting mental disorder, such as Obsessive Compulsive Disorder or Alcohol Dependence, the depressed mood, by virtue of its intensity or effect on functioning, can be clearly distinguished from the individual's usual mood.

APPENDIX 2. DSM-III-R Criteria for Dysthymia

- A. Depressed mood (or can be irritable mood in children and adolescents) for most of the day, more days than not, as indicated by subjective account or observation by others, for at least two years (one year for children and adolescents)
- B. Presence, while depressed, of at least two of the following:
 - (1) poor appetite or overeating
 - (2) insomnia or hypersomnia
 - (3) low energy or fatigue
 - (4) low self-esteem
 - (5) poor concentration or difficulty making decisions(6) feelings of hopelessness
- C. During a two-year period (one-year for children and adolescents) of the disturbance, never without the symptoms in A for more than two months at a time.
- D. No clear evidence of a Major Depressive Episode during the first two years (one year for children and adolescents) of the disturbance.
 - Note: There may have been a previous Major Depressive Episode, provided there was a full remission (no significant signs or symptoms for six months) before development of the Dysthymia. In addition, after these two years

- (one year in children or adolescents) of Dysthymia, there may be superimposed episodes of Major Depression, in which case both diagnoses are given.
- E. Has never had a Manic Episode . . . or an unequivocal Hypomanic Episode.
- F. Not superimposed on a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder.
- G. It cannot be established that an organic factor initiated and maintained the disturbance, e.g., prolonged administration of an antihypertensive medication.

Specify primary or secondary type:

Primary type: the mood disturbance is not related to a preexisting, chronic, nonmood Axis I or Axis III disorder, e.g., Anorexia Nervosa, Somatization Disorder, a Psychoactive Substance Dependence Disorder, an Anxiety Disorder, or rheumatoid arthritis.

Secondary type: the mood disturbance is apparently related to a preexisting, chronic, nonmood Axis I or Axis III disorder.

Specify early onset or late onset:

Early onset: onset of disturbance before age 21. Late onset: onset of disturbance at age 21 or later.

Fluvoxamine Treatment of Obsessive-Compulsive Disorder

Teri L. Perse, M.D., M.P.H., John H. Greist, M.D., James W. Jefferson, M.D., Rochelle Rosenfeld, M.S., and Reuven Dar, Ph.D.

Sixteen outpatients who met DSM-III criteria for obsessive-compulsive disorder completed a 20-week double-blind, crossover trial with fluvoxamine and placebo. Thirteen (81%) improved with fluvoxamine, while three (19%) improved with placebo. Fluvoxamine treatment was associated with significant improvement on measures of obsessive-compulsive symptoms, anxiety, and depression. Depressed subjects' improvement on obsessive-compulsive measures correlated with improvement in symptoms of depression. Nondepressed subjects also showed improvement on measures of obsessive-compulsive symptoms. In this trial, fluvoxamine was an effective and safe treatment for obsessive-compulsive disorder.

(Am J Psychiatry 1987; 144:1543-1548)

Obsessive-compulsive disorder, both socially and occupationally incapacitating at its worst, had until recent years been refractory to most available treatments. Now, behavioral techniques such as exposure and response prevention are reported to be of benefit in more than 50% of patients with the disorder (1–3). Clomipramine hydrochloride, a tricyclic antidepressant, has also been shown to be effective in symptom reduction (1–9). Six of seven studies reported reductions in rituals and obsessions independent of antidepressant effect (4–9), and Marks found the same

result in his recent unpublished study (personal communication). Because it is a potent inhibitor of serotonin reuptake (7, 8), clomipramine's beneficial effects have been linked to effects on this neurotransmitter, even though desmethylclomipramine, its primary metabolite, also inhibits norepinephrine reuptake (10–12).

Further support for a serotonin hypothesis of obsessive-compulsive disorder came from studies of zimelidine and fluoxetine, two other potent serotonin reuptake blockers. Two studies demonstrated some improvement in obsessive-compulsive patients treated with zimelidine and indicated that improvement was not related to pretreatment depression levels (13, 14). Similarly, a marked decrease in symptoms of obsessive-compulsive disorder was reported for six of seven patients treated with fluoxetine (15, 16).

Fluvoxamine is a 2-aminoethyloxime aralkylketone, structurally unrelated to tricyclic or tetracyclic antidepressants. It is a more potent serotonin reuptake blocker than clomipramine or zimelidine, has negligible effects on the norepinephrine system, and causes no inhibition of monoamine oxidase (17). Fluvoxamine has no significant affinity for muscarinic receptors (17). It causes no more orthostatic hypotension than placebo (18), and its other cardiovascular effects are negligible (17, 18). Its most prominent side effect is nausea, which affected 28% of more than 900 study patients and volunteers and was severe enough in 5% to cause them to drop out of treatment (19).

In double-blind studies, fluvoxamine produced antidepressant effects equivalent to clomipramine and imipramine (20–22). Compared to depressed patients taking clomipramine, patients treated with fluvoxamine used less anxiolytic medication (20).

Because of its serotonergic properties and its minimal anticholinergic, sedative, and cardiovascular side effects, a trial of fluvoxamine in obsessive-compulsive disorder was undertaken.

Received Jan. 8, 1987; revised June 9, 1987; accepted Aug. 18, 1987. From the Anxiety Disorders Center, Department of Psychiatry, University of Wisconsin. Address reprint requests to Dr. Greist, Anxiety Disorders Center, Center for Health Sciences, 600 Highland Ave., Madison, WI 53792.

Supported in part by a grant from Merck, Sharp & Dohme Pharmaceuticals Co.

Copyright © 1987 American Psychiatric Association.

TABLE 1. Change in Obsessive-Compulsive, Depression, and Anxiety Symptoms in 16 Obsessive-Compulsive Outpatients After 8 Weeks of Fluvoxamine and Placebo Treatment

				Fluvoxa	mine		
		So	ore		Chan	œ.	
	Drug P	Baseline	After	Drug	+a	. <u>5~</u>	Percent
Measure	Mean	SD	Mean	SD	(df=15)	р	Improvement
Obsessive-compulsive measures							
SCL-90 obsessive-compulsive scale	1.87	0.77	1.16	0.67	3.38	.004	38.0
General Rating Scale—obsessions	5.11	2.18	3.07	1.98	3.30 ^b	.006	40.0
General Rating Scale—compulsions	5.00	1.94	3.56	2.00	2.63	.019	28.8
Maudsley Obsessive-Compulsive Inventory	16.23	5.33	13.87	5.32	2.67°	.02	14.6
Obsessive-Compulsive Checklist	25.44	14.22	20.06	12.92	1.74	.10	21.2
Depression measures							
Hamilton Rating Scale for Depression	13.97	4.82	9.47	5.55	3.17 ^c	.007	32.3
SCL-90 depression scale	1.70	0.76	0.96	0.77	3.08	.008	59.5
Beck Depression Inventory	12.50	4.89	9.73	7.51	1.67°	.12	22.2
Anxiety measures							
Hamilton Rating Scale for Anxiety	12.09	3.60	7.69	3.60	3.77	.002	36.4
SCL-90 general symptoms index	1.17	0.59	0.68	0.39	2.86	.012	41.9

^aTwo-tailed t test.

METHOD

Twenty outpatients (10 men and 10 women) between the ages of 18 and 60 years (average=39.8, range=21-59) who met DSM-III criteria for obsessive-compulsive disorder (on the basis of interviews by two psychiatrists) were studied. Admission criteria included an illness duration of at least 12 months (average=14.8 years, range=1.2-44) and absence of psychosis, suicidal behavior, substance abuse, substantial medical illness, and history of neurosurgery. Eight patients had a history of major depression, and four of them satisfied criteria for major depression at entry into the study. Three patients had past histories of atypical bipolar disorder (bipolar II) because of previous episodes of hypomania. Subjects signed informed consent statements approved by the Food and Drug Administration and the University of Wisconsin Human Subjects Committee.

A random assignment, 20-week, placebo-controlled, double-blind crossover design was employed. All subjects received placebo for 2 weeks under single-blind conditions, followed by 8 weeks of either fluvoxamine or placebo under double-blind conditions. Weeks 11 and 12 were again placebo (single-blind), followed by crossover (double-blind) to the opposite condition for 8 weeks. The initial dose was 25 mg b.i.d., and the dose was increased as tolerated by 25 mg every 4 days to a maximum of 150 mg b.i.d. Patients were evaluated biweekly, and dose adjustments were based on the status of obsessive-compulsive symptoms and the occurrence of adverse effects.

With the exception of one patient who received lorazepam (0.5 mg/day) and five patients who received low-dose alprazolam, other concomitant psychotropic

medications were not used. Three received alprazolam regularly in both the placebo and the active drug phases (dose range=0.25-3.5 mg/day), while two received it only during the single-blind placebo phase (dose range=0.5-1.5 mg/day). Nonpsychotropic medications considered necessary for a patient's welfare were permitted.

Behavior therapy was not provided during the study, although several subjects had had previous behavior therapy and others had read self-help books advocating behavior therapy.

Patients were assessed at the beginning and end of each 2-week, single-blind, placebo washout period (weeks 0, 2, 10, and 12); at weeks 6 and 16 (midpoints of the double-blind treatment periods); and at weeks 10 and 20 (end of the double-blind treatment periods). The measures used included the Obsessive-Compulsive Checklist (23), Maudsley Obsessive-Compulsive Inventory (24), Hamilton Rating Scale for Anxiety (25), Hamilton Rating Scale for Depression (26), SCL-90 (27), and Beck Depression Inventory (BDI) (28). In addition, on every biweekly visit patients completed the General Rating Scale, which measured overall level of functioning, time spent ritualizing, and frequency and intensity of obsessive thoughts on a scale of 0 (not at all) to 8 (very severe).

Each of the three physician investigators made independent, blind clinical ratings of the patients' changes in each phase of the study. Since physician contact with patients varied, the independent ratings were compared and discrepancies were discussed until consensus was obtained. Patients were rated as better, somewhat better, not changed, or worse. Baseline symptoms were used as the reference. "Better" was defined as a substantial or complete loss of symptoms

 $^{^{}b}df = 13.$

 $^{^{}c}df=14.$

····			Pla	icebo			
y		ore				Differe Betwe Placebo	en
	ebo	., .		Chan	ge	Drug	
Base	eline	After I	Placebo	t ^a		t ^a	
Mean	SD	Mean	SD_i^l	(df=15)	p	(df=15)	p
1.62	0.76	1.71	0.77	-0.49	.63	-2.46	.027
3.53	2.72	4.31	2.67	-1.30	.21	-2.21^{b}	.045
4.78	1.91	5.12	2.00	-0.66	.52	-2.52	.023
15.06	5.17	16.12	4.59	-1.30	.21	-1.92°	.075
23.47	13.40	26.19	13.88	-1.41	.18	-2.01	.062
12.30	4.40	12.93	5.02	-0.54 ^c	.60	-3.19 ^b	.007
1.41	0.86	1.48	0.82	-0.43	.67	-2.42	.029
11.28	7.07	12.37	7.56	-1.13	.275	-2.04 ^c	.061
12.00	4.30	11.47	5.22	0.38°	.71	-2.69 ^c	.018
1.00	0.50	1.06	0.60	-0.56	.58	-2.18	.046

with pronounced improvement of social or role function. "Somewhat better" was defined as a positive change from baseline with continued presence of some impairment from obsessive-compulsive symptoms.

All patients underwent a physical examination and an ECG at the beginning of the study. Weight, sitting and standing blood pressures, and resting pulse rate were obtained every 2 weeks. Laboratory studies that included a chemistry panel (creatinine, BUN, glucose, calcium, phosphorus SGOT, SGPT, bilirubin, LDH, and cholesterol), urinalysis, and complete blood count were obtained at weeks 0, 10, and 20. Blood samples for serum fluvoxamine levels were drawn at the end of weeks 6, 10, 16, and 20. Dexamethasone suppression tests (DSTs) were performed at the end of weeks 2, 10, and 20.

RESULTS

Of the 20 patients who entered the study, four (one man and three women) terminated prematurely. One, a woman with a history of bipolar disorder, was withdrawn at week 6 when she became manic while taking fluvoxamine. Another was discontinued at week 6 because of incapacitating depression while taking placebo. A third was withdrawn at week 17 while taking placebo because of severe depression with suicidal ideation. The fourth patient had not been compliant with medication and decided to withdraw at week 18 while taking fluvoxamine.

To examine the effect of fluvoxamine on obsessivecompulsive disorder and depression, 10 dependent measures were chosen in advance as criteria for change. These variables were the SCL-90 obsessivecompulsive scale, General Rating Scale—obsessions, General Rating Scale—compulsions, Maudsley Obsessive-Compulsive Inventory, Obsessive-Compulsive Checklist, Hamilton depression scale, SCL-90 depression scale, BDI, Hamilton anxiety scale, and the SCL-90 general symptoms index.

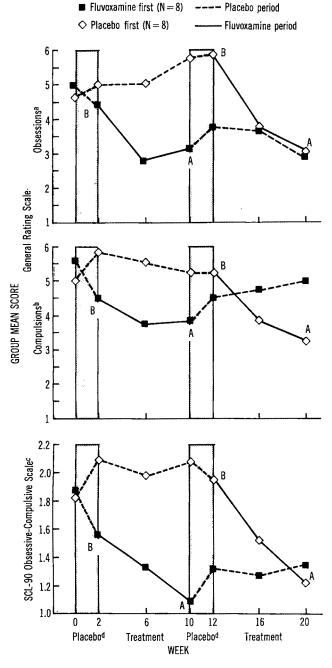
Baseline scores for the 10 measures were calculated for each subject by averaging the scores for the 2 weeks preceding the drug period. These baseline scores were compared to scores at the end of each drug period by using paired t tests. The results indicated that fluvoxamine was associated with a statistically significant (p<.05) improvement on eight of the 10 dependent measures (see table 1). The other two measures (the BDI and the Obsessive-Compulsive Checklist) also showed nonsignificant trends toward improvement. When similar tests were conducted to assess the effect of the placebo, none of the measures changed significantly (in fact, nine of the 10 measures showed a slight negative effect for placebo).

Additional t tests comparing the scores at the end of the drug period to those at the end of the placebo period revealed that fluvoxamine was significantly (p<.05) more effective than placebo on seven of the 10 dependent measures. For the other three measures (the Maudsley Obsessive-Compulsive Inventory, Obsessive-Compulsive Checklist, and the BDI), the results were again in the same direction but only approached statistical significance (t=1.92, 2.01, and 2.04, respectively, df=15, p<.10 on all three). The general pattern of the results is reflected in figure 1, which illustrates the profile of three of the assessment measures for the two groups across the 20 weeks. The subjects receiving fluvoxamine showed a decline in obsessive-compulsive symptoms between weeks 2 and 10, during which time the subjects taking placebo showed no change. After week 12, the pattern reversed. The subjects who were switched to placebo began to display increased symptoms, while those changed to fluvoxamine improved.

Change scores of the fluvoxamine-first subjects (N=8) on the 10 variables were compared to the respective change scores of the fluvoxamine-second subjects (N=8) by using two-sample t tests to examine for sequence effects. None of the differences was statistically significant, indicating that order of administration of drug and placebo did not affect results.

The physician clinical rating scale (based on consensus among the raters) indicated that nine (56%) of the 16 patients who completed the study were "better" and four (25%) "somewhat better" while treated with fluvoxamine. Three (19%) showed no change while taking fluvoxamine, and no subjects worsened. While taking placebo, in contrast, no patient was rated as "better," only three (19%) were rated as "somewhat better," 13 (81%) were unchanged, and none worsened. The differences between the physician ratings for the placebo versus drug periods were tested with a Wilcoxon matched-pair test. The results indicated that patients improved significantly while taking the drug (z=2.93, p<.01).

FĬGURE 1. Change in Obsessive-Compulsive Symptoms in 16 Outpatients Receiving Fluvoxamine and Placebo in a Crossover Study



aSignificant change from baseline (point B) to end of drug treatment (point A) for the two groups pooled together (t=3.30, df=13, p<.01) (two-tailed t test for paired data for all comparisons). bSignificant change from baseline (point B) to end of drug treatment (point A) for the two groups pooled together (t=2.63, df=15, p<.05).

p<.03).

Significant change from baseline (point B) to end of drug treatment (point A) for the two groups pooled together (t=3.38, df=15, p<.01).

dSingle-blind washout period.

An example of typical improvement (rated as "better" by the clinicians) occurred in a 36-year-old

TABLE 2. Correlations Between Changes in Obsessive-Compulsive and Depression Scores in 16 Obsessive-Compulsive Outpatients After 8 Weeks of Fluvoxamine Treatment

Measure of Change in Obsessive-Compulsive	Chan Ham Depre Sce	ilton ession	SC Depr	nge in L-90 ression core	Change in Beck Depression Score		
Symptoms Symptoms	ra	р	ra	p	r ^a	р	
SCL-90 obsessive- compulsive score change General Rating Scale score change	.59	.02	.85	.001	.73	.002	
Obsessions	.23	.42	.44	.12	.50	.07	
Compulsions	.66	.008	.79	.001	.76	.001	
Maudsley Obsessive- Compulsive Inventory score change	05	.88	.49	.06	.31	.29	
Obsessive-Compulsive Checklist score							
change	.52	.046	.57	.02	.78	.001	

^aTwo-tailed.

woman with a 7-year history of obsessive-compulsive disorder who decreased her ordering and cleaning rituals from more than 8 hours per day to less than 30 minutes (a normal amount) and reported virtual freedom from obsessions about order and cleanliness. Her improvement generalized to marital, child care, and occupational activities. Ratings of dysfunction at home, at work, socially, and with reading decreased from 20 (out of 40 possible) to 4 with fluvoxamine and rose to 22 when she was switched (double-blind) to placebo. She regained her improvement when fluvoxamine treatment was resumed on a compassionate use protocol after the study and has maintained her gains at 12-month follow-up. The four patients who were rated as "somewhat better" experienced worthwhile but less dramatic improvement. Two of the three nonresponders received alprazolam throughout the study because their anxiety was so great. Both had atypical presentations, one with severe generalized anxiety and the other with somatoform symptoms in addition to obsessive-compulsive symptoms.

Change scores of the 10 dependent measures were correlated to examine the relationships between the changes in obsessive-compulsive and depressive symptoms. The change scores of obsessive-compulsive measures were highly correlated with the change scores of measures of depression (see table 2). In fact, these correlations were as high as the intercorrelations among the different measures of obsessive-compulsive symptoms. In general, changes in depression were more highly correlated with changes in obsessions than with changes in compulsive rituals.

The presence of depression at study outset, however, was not related to the change in obsessive-compulsive symptoms, and even patients with low depression scores improved significantly on the obsessive-compulsive dimension (in fact, the patient with the lowest

TABLE 3. Correlations Between Baseline Depression and Change in Obsessive-Compulsive Symptoms in 16 Outpatients After 8 Weeks of Fluvoxamine Treatment

Measure of Change in Obsessive-Compulsive	Baseli Hamil Depres Scor	ton sion	Baseline Beck Depression Score		
Symptoms	r ^a	p	r ^a	p	
SCL-90 obsessive-compulsive score change General Rating Scale score change	0935	.73	4466	.08	
Obsessions	.2111	.47	0737	.80	
Compulsions	.001	1.00	1303	.63	
Maudsley Obsessive-Compulsive Inventory score change Obsessive-Compulsive Checklist	.2383	.39	1029	.72	
score change	.2317	.39	0167	.95	

TABLE 4. Correlations Between Symptom Changes and Fluvoxamine Blood Levels at the End of Drug Treatment in Obsessive-Compulsive Outpatients

	Fluvoxamine Blood Level				
Measure of Improvement	ra	N	р		
Changes in scores on obsessive-compulsive measures					
SCL-90 obsessive-compulsive scale	.50	13	.08		
General Rating Scale					
Obsessions	.56	11	.07		
Compulsions	.47	13	.11		
Maudsley Obsessive-Compulsive Inventory	.21	12	.52		
Obsessive-Compulsive Checklist	.44	13	.14		
Changes in scores on depression measures					
Hamilton Rating Scale for Depression	.31	12	.32		
SCL-90 depression scale	.35	13	.24		
Beck Depression Inventory	.44	12	.15		
Changes in scores on anxiety measures					
Hamilton Rating Scale for Anxiety	.28	13	.36		
SCL-90 general symptoms index	.48	13	.10		

^aTwo-tailed.

baseline Hamilton depression score demonstrated the greatest improvement on the Maudsley Obsessive-Compulsive Inventory). Baseline Hamilton depression and BDI scores were correlated with change scores on the five measures of obsessive-compulsive symptoms (see table 3). Only one of the 10 correlations was higher than .24, and none was statistically significant at the .05 level.

Changes during the drug period in both depressive and obsessive-compulsive symptoms were correlated with fluvoxamine blood levels at the end of the drug periods (mean±SD=296.85±180.09 ng/ml). Change scores of several dependent measures were moderately correlated with fluvoxamine blood level (see table 4), so that amount of improvement was positively related to blood levels. All the correlations were in the same direction, but none reached statistical significance due to the small number of subjects for whom this information was available.

Fluvoxamine had no significant effects on sitting or standing blood pressure, pulse, or weight. There were substantial weight changes in a few subjects. One overweight woman lost 7.7 kg while taking the drug, and an overweight man lost 7.3 kg. Another overweight woman and a slightly overweight man gained 1.8 kg each. Finally, an anorexic woman who weighed 46.4 kg and started the study with fluvoxamine gained 5.0 kg by the end of the drug period. Nausea, a side effect reported to be troublesome in 28% of fluvoxamine subjects in drug trials for depression, was a problem in only two subjects (13%), perhaps because the fluvoxamine dose was increased gradually (25 mg every 4 days as tolerated). No abnormalities in ECG, CBC, or other routine laboratory tests were associated with fluvoxamine or placebo, confirming that fluvoxamine was well tolerated.

Of the 13 subjects who had valid DST data at week 2, four had positive results. No subject, however, had positive DST results at the end of the drug period. With placebo, two subjects changed from positive to negative DST results, while three subjects changed in the other direction.

DISCUSSION

There are no medications commercially available in the United States that are consistently effective for the treatment of obsessive-compulsive disorder (clomipramine is under investigational protocols). The serotonergic profile of fluvoxamine suggested that it might be of benefit in the treatment of obsessive-compulsive disorder

Thirteen of the 16 subjects showed improvement while taking fluvoxamine, and nine of the 13 (69%) showed major improvement. Both investigator-administered inventories and patient self-reports showed clinically and statistically significant changes and clearly illustrated the superiority of fluvoxamine over placebo in the treatment of obsessive-compulsive disorder.

Since patients with obsessive-compulsive disorder are often depressed, it is important to discriminate antidepressant from antiobsessive-compulsive effects of various treatments. With clomipramine, most studies reported independent effects on depressive and obsessive-compulsive symptoms (4-9), while one found that clomipramine benefits in obsessive-compulsive disorder were highly correlated with lessening of depression (1). Fluvoxamine's effectiveness as an antidepressant was further confirmed in this study. There was a positive correlation between reductions in depression scores and reductions in measures of obsessive-compulsive symptoms and signs. However, even patients with low depression scores improved significantly on obsessive-compulsive dimensions. Absence of baseline depression, then, does not prevent the antiobsessive-compulsive effect of fluvoxamine. Improvement of both disorders may correlate highly, but,

with the exception of clomipramine, antidepressants have not proven consistently worthwhile for the treatment of obsessive-compulsive disorder (5–8).

Obsessive-compulsive disorder affects 0.5% to 2% of the population (29), is disabling to many, and causes substantial distress in almost all of those affected. Available behavioral treatments, while helpful, are ineffective or poorly tolerated by some patients. This study suggests that fluvoxamine is a safe and effective treatment for a majority of patients with obsessive-compulsive disorder. Further study of fluvoxamine as a treatment for obsessive-compulsive disorder is warranted, and specific comparisons with behavior therapy (exposure in vivo and response prevention) and clomipramine are indicated.

REFERENCES

- Marks IM, Stern RS, Mawson D, et al: Clomipramine and exposure for obsessive-compulsive rituals. Br J Psychiatry 1980; 136:1-25
- Boulougouris JC: Variables affecting the behavior modification of obsessive-compulsive patients treated by flooding, in Phobic and Obsessive-Compulsive Disorders. Edited by Boulougouris JC, Rabavilas AD. New York, Pergamon Press, 1977
 Steketee G, Foa EB, Grayson JB: Recent advances in the
- Steketee G, Foa EB, Grayson JB: Recent advances in the behavioral treatment of obsessive-compulsives. Arch Gen Psychiatry 1982; 39:1365–1371
- Montgomery SA: Clomipramine in obsessional neurosis: a placebo-controlled trial. Pharmacol Med 1980; 1:189–192
 Thoren P, Asberg M, Cronholm B, et al: Clomipramine treat-
- 5. Thoren P, Asberg M, Cronholm B, et al: Clomipramine treatment of obsessive-compulsive disorder, I: a controlled clinical trial. Arch Gen Psychiatry 1980; 37:1281–1285
- Anath J, Pecknold JC, Van Den Steen N, et al: Double-blind comparative study of clomipramine and amitriptyline in obsessive neurosis. Prog Neuropsychopharmacol 1981; 5:257–262
- Insel TR, Murphy DL, Cohen RM, et al: Obsessive-compulsive disorder: a double-blind trial of clomipramine and clorgyline. Arch Gen Psychiatry 1981; 40:605–612
- Volavka J, Neziroglu F, Yaryura-Tobias JA: Clomipramine and imipramine in obsessive-compulsive disorder. Psychiatry Res 1985; 14:83-91
- Flament M, Rapoport JL: Childhood obsessive-compulsive disorder, in New Findings in Obsessive-Compulsive Disorder. Edited by Insel TR. Washington, DC, American Psychiatric Press, 1984
- Bertilsson L, Asberg M, Thoren P: Differential effect of chlorimipramine and nortriptyline on cerebrospinal fluid amine metabolites of serotonin and noradrenaline in depression. Eur J Clin Pharmacol 1974; 7:365–368
- 11. Asberg M, Ringberger VA, Sjoqvist F: Monoamine metabolites

- in cerebrospinal fluid and serotonin-uptake inhibition during treatment with chlorimipramine. Clin Pharmacol Ther 1977; 21:201–207
- Traskman L, Asberg M, Bertilsson L, et al: Plasma levels of chlorimipramine and its demethy-metabolite during treatment of depression: differential biochemical and clinical effects of the two compounds. Clin Pharmacol Ther 1979; 26:600–610
- 13. Kahn RS, Westenberg HC, Jolles J: Zimelidine treatment of obsessive-compulsive disorder: biological and neuropsychological aspects. Acta Psychiatr Scand 1984; 69:259–261
- Prasad A: A double-blind study of imipramine versus zimelidine in treatment of obsessive-compulsive neurosis. Pharmacopsychiatry 1984; 17:61–62
- 15. Fontaine R, Chouinard G: Antiobsessive effect of fluoxetine (letter). Am J Psychiatry 1985; 142:989
- Fontaine R, Chouinard G: An open clinical trial of fluoxetine in the treatment of obsessive-compulsive disorder. J Clin Psychopharmacol 1986; 6:98–100
- Claassen V: Review of the animal pharmacology and pharmacokinetics of fluvoxamine. Br J Clin Pharmacol 1983; 15(Suppl 3):3495-3555
- 18. Roos JC: Cardiac effects of antidepressant drugs: a comparison of the tricyclic antidepressants and fluvoxamine. Br J Clin Pharmacol 1983; 15(Suppl 3):439S-445S
- 19. Bradford LD, Coleman BS, Hoeve L, et al: Summary of Properties of Fluvoxamine Maleate (8-38; 8-41-8-42): Internal Document 56681/40/84. Weesp, The Netherlands, Duphar BV, 1984
- De Wilde JE, Mertens C, Wakelin JS: Clinical trials of fluvoxamine vs chlorimipramine with single and three times daily dosing. Br J Clin Pharmacol 1983; 15(Suppl 3):4275

 –431S
- Klok CJ, Brouwer GJ, Van Praag HM, et al: Fluvoxamine and clomipramine in depressed patients: a double-blind clinical study. Psychiatr Scand 1981; 64:1–11
- 22. Itil TM, Shrivastava S, Mukherjee S, et al: A double-blind placebo-controlled study of fluvoxamine and imipramine in outpatients with primary depression. Br J Clin Pharmacol 1983; 15(Suppl 3):433S-438S
- Rachman SJ, Hodgson RJ: Obsessions and Compulsions. Englewood Cliffs, NJ, Prentice-Hall, 1980
 Marks IM, Hallam RS, Phellepot R, et al: Nursing in Behavioral
- Marks IM, Hallam RS, Phellepot R, et al: Nursing in Behavioral Psychotherapy: Research Series of the Royal College of Nursing. London, Royal College of Nursing, 1977
- Hamilton M: The assessment of anxiety states by rating. Br J Med Psychol 1959; 32:50-55
- Hamilton M: A rating scale for depression. J Neurol Neurosurg Psychiatry 1960; 23:56-62
- Derogatis LR, Lipman RS, Covi L: SCL-90: an outpatient psychiatric rating scale—preliminary report. Psychopharmacol Bull 1973; 9:13-28
- Beck AT: Depression: Clinical, Experimental and Theoretical Aspects. New York, Harper & Row, 1967
- Myers JK, Weissman MM, Tischler GL: Six-month prevalence of psychiatric disorders in three communities: 1980–1982. Arch Gen Psychiatry 1984; 41:959–967

Neuroleptic Responsivity of Negative and Positive Symptoms in Schizophrenia

Alan Breier, M.D., Owen M. Wolkowitz, M.D., Allen R. Doran, M.D., Alec Roy, M.B., John Boronow, M.D., Daniel W. Hommer, M.D., and David Pickar, M.D.

The authors prospectively examined the effects of double-blind, placebo-controlled neuroleptic withdrawal and administration on ratings of negative and positive symptoms in 19 young patients with chronic schizophrenia. Negative symptoms were significantly reduced by neuroleptic treatment, and negative and positive symptoms demonstrated similar patterns of reduction and exacerbation during neuroleptic treatment and withdrawal, respectively. The changes in negative and positive symptoms induced by neuroleptic treatment and withdrawal were not significantly correlated, however. The negative and positive symptom profiles of individual patients were significantly altered by neuroleptic treatment, indicating limitations to the cross-sectional classification of patients on the basis of predominance of one or the other symptom group. The authors discuss implications for the neurobiological underpinnings of negative and positive symptoms.

(Am J Psychiatry 1987; 144:1549-1555)

he efficacy of neuroleptic drugs in reducing the A psychotic symptoms of schizophrenia represents one of the relatively few "facts" about the illness that have direct pathophysiological implications. Paradoxically, the limitations to the therapeutic effects of neuroleptics have been a major stimulus for the development of new perspectives in clinical subtyping and in etiologic speculation. The most influential hypothesis attempting to integrate variable neuroleptic response and the now substantial evidence indicating structural brain abnormalities in some schizophrenic patients (1-10) is that of Crow (11, 12), who suggested that there are two syndromes of schizophrenia. According to Crow, one syndrome is characterized by a predominance of positive symptoms (e.g., delusions, hallucinations, and looseness of association),

Received Oct. 20, 1986; revised March 11, 1987; accepted May 7, 1987. From the Section on Clinical Studies, Clinical Neuroscience Branch, NIMH, Bethesda, Md. Address reprint requests to Dr. Breier, Maryland Psychiatric Research Center, Box 21247, Baltimore, MD 21228.

acute onset of illness, good response to neuroleptics, no intellectual impairment, and a putative dop.:mine pathophysiology. In contrast, the second syndrome involves predominantly negative symptoms (e.g., affective flattening, emotional blunting, poverty of speech, and social withdrawal), chronic course. poor response to neuroleptics, variable occurrence of intellectual impairment, and a proposed pathologic process that involves cell loss and structural changes in the brain.

Whereas the heuristic importance of the twosyndrome hypothesis is clear, the validity of several of its fundamental assumptions and its application to clinical practice require further assessment. A critical issue that remains controversial is the different al responsivity of positive and negative symptoms to neuroleptic treatment. In contrast to the now classic National Institute of Mental Health (NIMH and Veterans Administration (VA) collaborative scudies (13-16), which demonstrated that individual negative symptoms are highly responsive to neuroleptics, some studies focusing on related groups of positive and negative symptoms (17, 18) have reported a relative resistance of negative symptom clusters to neurcleptic treatment. Because of the uncertainty regarding the neuroleptic responsivity of negative symptoms, clinicians may be reluctant to administer antipsychotic medications to patients with schizophrenia who have a predominance of negative symptoms. Related issues that require examination involve the degree of overlap between negative and positive symptoms during the drug-free and neuroleptic treatment states, the stability of the negative and positive symptom subtypes across different treatment conditions, and the state versus trait significance of the negative and positive symptom subtyping approach.

In this paper we will report the results of a prospective, double-blind investigation of the effects of withdrawal of chronic neuroleptic treatment and the subsequent administration of fluphenazine on negative and positive symptoms in a group of young, chronically ill schizophrenic patients. We will examine the interrelationship between positive and negative symptoms and the stability of negative and positive symptom profiles from the drug-free to the neuroleptic treatment state.

TABLE 1. Demographic and Clinical Data for 19 Patients With Chronic Schizophrenia

		•				
Pa- tient	Age (years)	Sex	DSM-III Schizophrenia Diagnosis	Length of Illness (years)	Cumulative Length of Previous Hospital- izations (months)	Pre- morbid Adjust- ment Score ^a
1	53	F	Schizoaffective	46	120	19
2	23	M	Undifferentiated	6	42	22
3	29	M	Undifferentiated	9	15	25
4 5	44	M	Paranoid	27	90	25
5	20	F	Undifferentiated	4	1	23
6	34	M	Paranoid	12	8	11
7 ^b	26	F	Paranoid	6	0	11
8 9	31	M	Paranoid	12	40	14
9.	26	F	Paranoid	13	18	29
10 ^b	24	F	Undifferentiated	11	12	5
11 ^b	22	F	Paranoid	6	30	7
12 ^b	22	F	Undifferentiated	6	2	24
13.	22	M	Disorganized	3	14	24
14 ^b	22	M	Paranoid	1	1	22
15	22	M	Undifferentiated	6	2	26
16	30	M	Undifferentiated	16	24	27
17	24	F	Paranoid	10	40	28
18	38	M	Undifferentiated	21	25	17
19	24	F	Undifferentiated	9	20	11

^aScores on the Phillips Scale of Premorbid Adjustment; a higher score reflects poorer functioning.

^bThis patient did not participate in the neuroleptic withdrawal study.

METHOD

Patients and Study Design

Nineteen patients meeting DSM-III criteria for schizophrenia who were hospitalized on the 4-East inpatient unit of the National Institutes of Health Clinical Center participated in the study. The patients were young; their mean±SD age was 28±8 years. They had had chronic courses of illness; the mean ±SD number of years ill was 12±10, and the mean±SD number of previous hospitalizations was 9±8 (see table 1). Premorbid functioning was assessed by using the Phillips Scale of Premorbid Adjustment (19) (table 1). At the time of admission, the patients manifested a wide range of symptom severity; their scores on the 24-item Brief Psychiatric Rating Scale (BPRS) (20) ranged from 46 to 97 (mean=61.1±14). All patients were free of medical disorders, and all gave written informed consent before participating in the study.

The study had a neuroleptic withdrawal phase and a neuroleptic treatment phase, both conducted under double-blind, placebo-controlled conditions. The neuroleptic withdrawal phase consisted of a stabilization period on fluphenazine followed by discontinuation of fluphenazine and a subsequent drug-free period. Fourteen of the 19 patients had been treated continuously with neuroleptics for at least 6 months before admission and were included in the neuroleptic withdrawal phase. Within 1 week of entering the hospital, existing neuroleptic regimens were converted to fluphenazine hydrochloride, which was administered in unmarked

capsules under double-blind conditions; a clinically effective dose was established (mean±SD dose=27±12 mg/day). Benztropine (dose range=0.5-3 mg/day) was administered as required to minimize extrapyramidal symptoms; two patients did not require antiparkinsonian treatment. After at least 3 weeks of a stable dose of fluphenazine, placebo was substituted in identical capsules and administered throughout the drugfree phase.

The neuroleptic treatment phase of the study included the entire group of 19 patients and consisted of a drug-free period followed by a 4-week fluphenazine period. All of the patients had at least 4 neuroleptic-free weeks before fluphenazine administration with the exception of two patients whose fluphenazine was initiated after 15 and 18 drug-free days, respectively, because they experienced severe clinical deterioration while drug free. Five of the 19 patients had drug-free periods greater than 5 weeks because they had been neuroleptic free before admission to our research unit. The fluphenazine dose was adjusted on a clinical basis; maximum doses (mean±SD=31±12 mg) were achieved within the first 10 days of treatment and were continued throughout 4 weeks of treatment.

Symptom Ratings

Research psychiatrists blind to treatment conditions performed weekly ratings of psychopathology using the following rating instruments: 1) the Abrams and Taylor Scale for Emotional Blunting (21), 2) a 24-item version of the BPRS (20), and 3) the Bunney-Hamburg Scale for Global Ratings of Psychosis (22). To ensure consistent ratings, patients were rated throughout the study by their treating psychiatrist, who was blind to medication status. Once a week the entire research and treatment staff discussed behavioral observations by nurses and psychiatrists' ratings of each patient for the purposes of reaching a consensus.

The Abrams and Taylor Scale for Emotional Blunting is composed of 16 items (each item rated 0 for not present, 1 for slight, or 2 for clearly present) focusing on behavioral, affective, and cognitive components of emotional blunting. No overt psychotic (i.e., "positive") symptoms are rated. This scale has been shown to have strong predictive validity (21). Total scores were used in this study. The BPRS items (rated 1 for not present to 7 for severe) motor retardation, blunted affect, emotional withdrawal, and loss of function were summed and used as the BPRS negative symptom cluster. The BPRS items hallucinatory behavior; unusual thought content, distractibility, and conceptual disorganization were summed as the BPRS positive symptom cluster. Bunney-Hamburg global psychosis ratings are based on behavioral observations of levels of functioning and severity of psychosis; ratings range from 1 for minimal to 15 for very severe. Interrater reliabilities determined by interclass correlation for the scales were 0.81 (p<.001) for the BPRS, 0.59 (p< .005) for the emotional blunting scale, and 0.71

(p<.001) for the global psychosis scale. The lower interclass correlation for the emotional blunting scale in comparison with the BPRS and the global psychosis scale may be related to less detailed behavioral definitions corresponding to each possible score for each emotional blunting scale item.

To examine the stability within patients of the relative predominance of negative and positive symptoms, we established a set of criteria to classify patients into one of the four following symptom profile groups: 1=high negative and high positive, 2=high negative and low positive, 3=low negative and high positive, and 4=low negative and low positive. A high negative symptom profile was defined as the presence of at least one of the following: 1) a score greater than 5 on any of the BPRS negative symptom cluster items, 2) a total BPRS negative symptom cluster score greater than 15, and 3) a total score greater than 14 on the emotional blunting scale. A high positive symptom profile was defined as the presence of either a score greater than 5 on any BPRS positive symptom cluster item or a total BPRS positive symptom cluster score greater than 15. The criteria for negative and positive symptom cutoffs were determined before data analysis. A score greater than 5 (i.e., 6 or 7) on any BPRS negative or positive symptom item was considered "severe" according to the BPRS. A BPRS positive or negative symptom cluster score of 15 or greater encompassed a "moderate" symptom severity score (i.e., 4 or 5) on at least three cluster items. An emotional blunting scale total score of 15 or above has been found from our previous clinical experience with this instrument to represent a substantial level of negative symptoms. Symptom profiles were determined for the 19 patients while they were drug free and during the fourth week of fluphenazine treatment.

Data Analysis

For the neuroleptic withdrawal and treatment phases of the study, mean weekly ratings from the final week of either neuroleptic or placebo treatment (week 0), respectively, and the mean weekly ratings for levels in the ensuing 4 weeks (weeks 1–4) of placebo or neuroleptic administration were analyzed by analysis of variance (ANOVA) with repeated measures and post hoc Tukey's comparison. Clinical response to neuroleptic treatment was reflected by calculating the change in ratings from week 0 (baseline) to week 4. Pearson's product-moment correlations were used for correlative analyses. All probability values are two-tailed.

RESULTS

Effects of Neuroleptic Withdrawal and Treatment

Negative symptom ratings were found to be sensitive to both neuroleptic withdrawal and treatment.

Significant increases in the emotional blunting scale (F=4.8, df=4, 52, p<.002) and the BPRS negative symptom cluster (F=5.2, df=4, 52, p<.001) were found during the neuroleptic withdrawal period. Significant increases in the emotional blunting scale occurred during the fourth drug-free week, and significant increases in the BPRS negative symptom ratings occurred during the third and fourth drug-free weeks (figure 1). Neuroleptic treatment lowered emotional blunting scale (F=2.8, df=4, 72, p<.05) and BPRS negative symptom ratings (F=4.5, df=4, 72, p<.005). Significant decreases were found during the fourth treatment week for both the emotional blunting scale and the negative symptom cluster scores (figure 2).

Similar to ratings of negative symptoms, BPRS positive symptom ratings significantly increased curing the neuroleptic withdrawal period (F=3.7, df=4, 52, p<.02) and significantly decreased during the reuroleptic treatment period (F=9.5, df=4, 72, p< 001). Post hoc analysis indicated that neuroleptic with drawal-related increases in positive symptoms occurred during the third week and neuroleptic-treat nent-related decreases occurred during the second, third, and fourth weeks (figures 1 and 2).

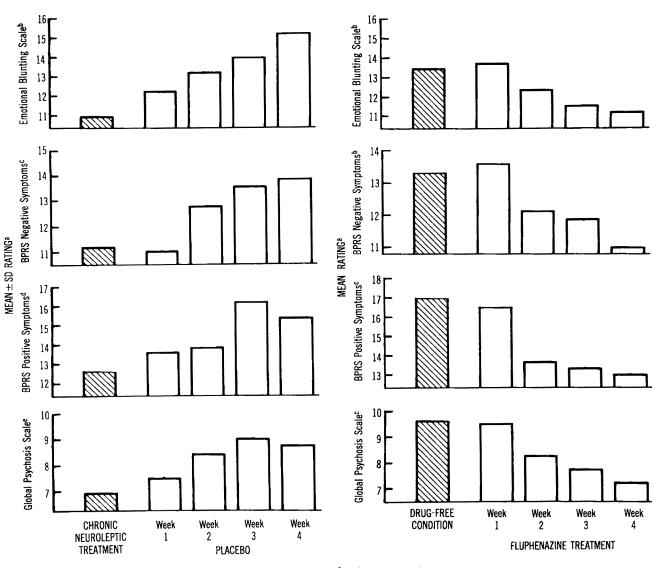
The Bunney-Hamburg global psychosis ratings, reflecting the overall psychotic state, were robustly altered by neuroleptic withdrawal (F=7.7, df=4, 52, p<.02) and neuroleptic treatment (F=20.5, df=4, 72, p<.001). Significant increases occurred during the second, third, and fourth drug-free weeks and significant decreases during the second, third, and fourth neuroleptic treatment weeks (figures 1 and 2. Although strong neuroleptic-related changes in symptoms were found in this study using within-group comparisons, it would be interesting to examire the longitudinal responsiveness patterns of negative and positive symptoms to neuroleptic treatment by using a control group of drug-free schizophrenic patients.

Relationships Between Symptom Ratings

Correlations between negative symptoms, positive symptoms, and global psychosis ratings when patients were drug free and during the fourth week of flushenazine treatment, and between changes in these symptom ratings during neuroleptic withdrawal and creatment, respectively, are shown in table 2. Significant correlations were consistently found between the emotional blunting scale and the BPRS negative symptom ratings. Neither the emotional blunting scale nor the BPRS negative symptom ratings, however, significantly correlated with the BPRS positive symptom ratings during the drug-free period, and the emotional blunting scale and BPRS positive symptom ratings were not significantly correlated during the fourth flupherazine treatment week. Despite the fact that both neuroleptic withdrawal and treatment produced significant increases and decreases, respectively, in negative and positive symptom ratings, there were no signi icant correlations between change in either the emotional

FIGURE 1. Clinical Ratings of 14 Patients With Chronic Schizophrenia During Neuroleptic Withdrawal

FIGURE 2. Clinical Ratings of 19 Patients With Chronic Schizophrenia Before and During Fluphenazine Treatment



^aHigher scores indicate greater symptom severity.

blunting scale or BPRS negative symptom ratings and change in the BPRS positive symptom cluster ratings during neuroleptic withdrawal or treatment (table 2). Although the emotional blunting scale and the BPRS negative symptom cluster ratings were each significantly correlated with global psychosis ratings during the drug-free week and after 4 weeks of fluphenazine treatment, the BPRS positive symptom cluster ratings were most closely related to the global psychosis ratings (table 2).

Total Phillips scores were significantly correlated with emotional blunting scale ratings during the drug-

^aHigher scores indicate greater symptom severity. ^bScore significantly lower during fourth week of treatment (p<.05). ^cScore significantly lower during second (p<.01), third (p<.01), and fourth (p<.01) weeks of treatment.

free and fourth neuroleptic treatment weeks (r=0.59, N=19, p<.01; r=.68, N=19, p<.001) but not with other symptom ratings.

Balance Between Negative and Positive Symptoms

Negative and positive symptom profiles were determined during the baseline drug-free week and during the fourth week of neuroleptic treatment for the 19 patients in the neuroleptic treatment portion of the study (figure 3). Neuroleptic treatment produced a significant shift in the distribution of patients in the four profiles ($\chi^2=10.4$, df=3, p<.02) (figure 3). When drug free, 10 (53%) of 19 patients had high negative-high positive symptom profiles, whereas only one (5%) remained in this category following neuroleptic treat-

bScore significantly higher during fourth week of withdrawal (p<.01).

cScore significantly higher during third (p<.05) and fourth (p<.05) weeks of withdrawal.
dScore significantly higher during third week of withdrawal (p<.05).

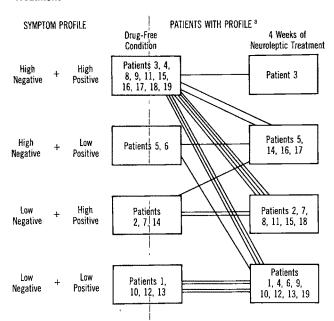
^dScore significantly higher during third week of withdrawal (p<.05). ^cScore significantly higher during second (p<.05), third (p<.01), and fourth (p<.01) weeks of withdrawal.

TABLE 2. Correlations Between Symptom Ratings Made During Four Treatment Conditions in Patients With Chronic Schizophrenia

		Corre	lation (r)	
Rating Instruments Compared	Drug-Free Condition (N=19)	4 Weeks of Neuroleptic Treatment (N=19)	Change During Neuroleptic Withdrawal (N=14)	Change During Neuroleptic Treatment (N=19)
Emotional blunting scale versus BPRS negative symptom cluster	.52ª	.71 ^b	.59ª	.49 ^a
Emotional blunting scale versus BPRS positive symptom cluster	.29	.24	03	04
Emotional blunting scale versus global psychosis scale	.44 ^a	.45ª	05	08
BPRS negative symptom cluster versus BPRS positive symptom cluster	.41	.53ª	12	.31
BPRS negative symptom cluster versus global psychosis scale	.48 ^a	.54ª	.21	.23
BPRS positive symptom cluster versus global psychosis scale	.82 ^b	.74 ^b	.63ª	.76 ^b

 $_{b}^{a}p < .05.$

FIGURE 3. Symptom Profiles of 19 Patients With Chronic Schizophrenia During Drug-Free Condition and Four Weeks of Neuroleptic Treatment



^aNumbers refer to individual patients described in table 1.

ment. A predominantly negative symptom profile (high negative-low positive) was more prevalent during neuroleptic treatment (four patients—21%) than during the drug-free state (two patients—11%), although it was relatively uncommon in both treatment conditions. Eight of 19 patients (patients 1, 2, 3, 5, 7, 10, 12, 13) had no change in their negative-positive symptom profile; four of these patients were in the low negative-low positive category when drug free.

DISCUSSION

Results from this study suggest that both positive and negative symptoms in chronically ill schizophrenic

patients are responsive to the effects of neuroleptics. Despite significant improvement in symptoms during neuroleptic treatment, considerable positive, negative, and overall psychotic symptoms remained at the end of the treatment trial; further reductions in symptoms, however, might be expected to occur during the course of continued treatment.

Our observation of significant neuroleptic-induced improvement in negative symptoms is in agreement with a number of previous investigations in which symptoms such as social withdrawal (13-15, 23), slowed speech (13, 14), retardation (24), indifference to the environment (13, 14), and impaired self-care functioning (13, 14, 23) were shown under doubleblind conditions to be highly responsive to neuroleptic treatment. The frequently cited report of Johnstone et al. (17), which failed to demonstrate neurolepticinduced reduction in negative symptoms, differs from our study in that the patients studied by these authors had low negative symptom ratings before treatment. The worsening of negative symptoms during neuroleptic withdrawal is conceptually consistent with our neuroleptic treatment data and also with results from Docherty et al. (25), who found that symptoms such as social withdrawal, apathy, and motor retardation were part of the psychotic decompensation process following neuroleptic discontinuation. Although we attempted to minimize extrapyramidal symptom contaminants of negative symptoms by using clinically optimal doses of antiparkinsonian agents, it is recognized that neuroleptic side effects such as the akinesias can mimic negative symptoms.

In the light of the data presented, clinicians would be advised to consider a neuroleptic trial in schizophrenic patients who have prominent negative symptoms. Our findings also support the understanding that neuroleptic responsivity is not an all-or-none phenomenon but, rather, involves varying degrees of symptom resistance. Residual positive as well as negative symptoms are a frequent occurrence in many patients.

Several reports (26-28) have begun to draw a dis-

tinction between negative symptoms and the so-called defect state of schizophrenia, which is considered to encompass broad areas of work and social dysfunction. Despite the considerable overlap between negative symptoms and defect psychopathology, our study did not examine the nonnegative symptom aspects of the defect state. Other studies are needed to determine the neuroleptic responsivity of the global areas of work and social dysfunction encompassed in the schizophrenic defect state, although clinical experience would suggest that reductions in positive and negative symptoms are reflected in improved overall behavioral function. Moreover, it would be useful to determine if the negative symptoms of patients with the defect state show similar patterns of neuroleptic responsivity, as found in the patients in our study.

In addition to the controlled longitudinal design and assessment of symptom responsivity to both neuroleptic withdrawal and treatment, a strength of our study was the use of two rating scales to assess negative symptoms: a subscale of the BPRS and the emotional blunting scale. A third instrument, the Scale for the Assessment of Negative Symptoms (29), has recently been used on our unit, and preliminary data indicate that negative symptoms measured by this scale have neuroleptic response patterns similar to those of the negative symptoms measured by the BPRS and the emotional blunting scale reported here. The negative symptoms determined by the BPRS and the emotional blunting scale were significantly correlated when patients were drug free and also showed similar patterns of response to changes in neuroleptic treatment. Of interest, both during the drug-free condition and during the fourth week of neuroleptic treatment, negative symptoms were significantly correlated with global psychosis ratings but not with the BPRS positive symptom ratings. The lack of cross-sectional relation between positive and negative symptoms is in agreement with other reports (5, 30) and supports the notion that these ratings reflect distinct behavioral components of psychosis. Further indication of the independence of negative and positive symptoms is gained from the fact that, despite their mutual neuroleptic responsivity, changes following alterations in neuroleptic treatment conditions were not significantly related.

The emphasis on subdividing schizophrenic patients into syndromes based on the relative predominance of positive and negative symptoms reflects the perspective that the balance between these symptoms is a trait feature of schizophrenia with possible etiologic or pathophysiological implications (11, 12). Andreasen and Olsen (5) developed diagnostic criteria for cross-sectional identification of predominantly negative, predominantly positive, and mixed schizophrenia types and found that patients whose clinical presentation was characterized by prominent negative symptoms had significantly worse premorbid adjustment, higher incidence of previous ECT, and larger ventricle-brain ratios (VBRs) than patients with positive or mixed

symptoms, thus providing some validity for the trait concept. We also observed a significant relationship between poor premorbid functioning and negative symptoms. When we categorized the patient group cross-sectionally into four different negative and positive symptom profiles, however, we found that neuroleptic treatment significantly altered the distribution of patients in the symptom profile groups. During the drug-free condition, the majority of patients (53%) were characterized as having both high positive and high negative symptom levels, whereas predominance of either positive or negative symptoms alone was relatively uncommon (11% and 21%, respectively). After neuroleptic treatment, a marked decrease in the number of patients with high positive and high negative symptom profiles and increases in all remaining categories, including patients with predominantly negative symptom profiles, was observed. These data suggest that negative and positive symptom classification is critically dependent on neuroleptic treatment. Moreover, little support is gained for the validity of the cross-sectional categorization of patients on the basis of the predominance of positive and negative symptoms as representative of a trait marker. It should be noted, however, that the patient group in this study tended to be young and chronically ill with early onset of illness and a predominance of both negative and positive symptoms when drug free. Future research will be needed to determine if patient groups with characteristics different from those in this study have similar neuroleptic responsivity patterns.

The shared neuroleptic responsivity of positive and negative symptoms is consistent with our previous findings relating changes in plasma levels of the dopamine metabolite homovanillic acid (HVA) to both symptom groups during neuroleptic withdrawal and treatment (31). Other data suggest that elevated plasma HVA levels are positively correlated with the severity of schizophrenic psychopathology (31, 32) and good treatment response to neuroleptic agents (31, 33).

Despite evidence for dopaminergic involvement in both negative and positive symptoms, our results in this study do not support complete overlap of these symptom groups; rather, the lack of neuroleptic-related cross-sectional and longitudinal correlation suggests the possibility that independent factors may determine the degree of dopaminergic contribution in mediating these symptoms. Although it is unknown which independent pathophysiological processes are involved, other neurotransmitter systems that influence dopaminergic expression (e.g., noradrenergic [34] and peptidergic [35-37] systems) are potential candidates as contributors to negative and positive symptoms. It is also possible that these symptoms are related to dysfunction of distinct CNS dopamine systems (e.g., limbic versus mesocortical), each with separate neuroleptic response patterns (38). Emphasis on anatomic localization of symptoms using physiological as well as structural imaging techniques coupled with

pharmacological and biochemical probes may help to further establish the pathophysiology of positive and negative symptoms and lead to a refined hypothetical framework of the symptoms of schizophrenia.

REFERENCES

- 1. Johnstone EC, Crow TJ, Firth CD, et al: Cerebral ventricular size and cognitive impairment in chronic schizophrenia. Lancet 1976: 2:924-926
- 2. Weinberger DR, Torrey EF, Neophytides A, et al: Lateral cerebral ventricular enlargement in chronic schizophrenia. Arch Gen Psychiatry 1979; 36:735-739
- Weinberger DR, Torrey EF, Neophytides A, et al: Structural abnormalities of the cerebral cortex in chronic schizophrenia. Arch Gen Psychiatry 1979; 36:935-939
- 4. Andreasen NC, Smith MR, Jacoby CG, et al: Ventricular enlargement in schizophrenia: definition and prevalence. Am J Psychiatry 1982; 139:292-296
- 5. Andreasen NC, Olsen S: Negative vs positive schizophrenia: definition and validation. Arch Gen Psychiatry 1982; 39:789-
- 6. Nasrallah HA, Jacoby GG, McCalley-Whitters M, et al: Cerebral ventricular enlargement in subtypes of chronic schizophrenia. Arch Gen Psychiatry 1982; 319:774-777
- 7. Andreasen N, Nasrallah HA, Dunn V, et al: Structural abnormalities in the frontal system in schizophrenia. Arch Gen Psychiatry 1986; 43:136-144
- Nasrallah HA, Olson SC, McCalley-Whitters M, et al: Cerebral ventricular enlargement in schizophrenia: a preliminary follow-up study. Arch Gen Psychiatry 1986; 43:157-159
- 9. Boronow J, Pickar D, Ninan PT, et al: Atrophy limited to the third ventricle in chronic schizophrenic patients: report of a controlled series. Arch Gen Psychiatry 1985; 42:266-271
- Luchins DJ, Lewine RRJ, Meltzer HY: Lateral ventricular size, psychopathology and medication response in the psychoses. Biol Psychiatry 1984; 19:29-44
- Crow TJ: Molecular pathology of schizophrenia: more than one disease process? Br Med J 1980; 280:66-68
- Crow TJ: Positive and negative schizophrenic symptoms and the role of dopamine. Br. J Psychiatry 1980; 137:383–386 Cole JO, Klerman GL, Goldberg SC: Phenothiazine treatment
- in acute schizophrenia. Arch Gen Psychiatry 1964; 10:246-261
- 14. Goldberg SC, Klerman GL, Cole JO: Changes in schizophrenic psychopathology and ward behavior as a function of phenothiazine treatment. Br J Psychiatry 1965; 111:120-133
- 15. Casey JF, Bennett IF, Lindley C, et al: Drug therapy in schizophrenia: a controlled study of the relative effectiveness of chlorpromazine, promazine, phenobarbital and placebo. Arch Gen Psychiatry 1960; 2:210-220
- Goldberg SC: Negative and deficit symptoms in schizophrenia do respond to neuroleptics. Schizophr Bull 1985; 11:453-456
- 17. Johnstone EC, Crow TJ, Firth CD, et al: Mechanism of the

- antipsychotic effect in the treatment of acute schizophrenia. Lancet 1978; 1:848-851
- 18. Angrist B, Rotrosen J, Gershon S: Differential effects of amphetamine and neuroleptics on negative vs positive symptoms in schizophrenia. Psychopharmacology 1980; 11:1-3
- 19. Phillips L: Case history data and prognosis in schizophrenia. J Nerv Ment Dis 1953; 117:515-525
- Overall JE, Gorham DE: The Brief Psychiatric Rating Scale. Psychol Rep 1961; 10:799-812
- 21. Abrams R, Taylor MA: A rating scale for emotional blunting. Am J Psychiatry 1978; 135:226-229
- Bunney WE, Hamburg DA: Methods for reliable longitudinal observation of behavior. Arch Gen Psychiatry 1963; 9:280-294
- 23. May PR, Tuma AH, Dixon WJ: Schizophrenia: a follow-up study of the results of five forms of treatment. A ch Gen Psychiatry 1981; 38:776-784
- Klein DF: Importance of psychiatric diagnosis in prediction of clinical drug effect. Arch Gen Psychiatry 1967; 16:118-126
- Docherty JP, van Kammen DP, Siris SG, et al: Stages of onset of schizophrenic psychosis. Am J Psychiatry 1978; 135:420-426
- 26. Henrichs DW, Hanlon TE, Carpenter WT: The Quality of Life Scale: an instrument for rating the schizophrenic deficit syndrome. Schizophr Bull 1984; 10:388-398
- Andreasen NC: Positive vs negative schizophrenia: a critical evaluation. Schizophr Bull 1985; 11:380-389
- Sommers AA: "Negative symptoms": conceptual and methodological problems. Schizophr Bull 1985; 11:364-379
- Andreasen NC: Negative symptoms in schizophrenia: definition and reliability. Arch Gen Psychiatry 1982; 39:784-788
- 30. Lewine RRJ, Fogg L, Meltzer HY: Assessment of negative and positive symptoms in schizophrenia. Schizophr Bull 1983; 9: 368-378
- 31. Pickar D, Labarca R, Doran AR, et al: Longitudinal measurements of plasma homovanillic acid in schizophrenic patients: correlation with psychosis and response to neuroleptic treatment. Arch Gen Psychiatry 1986; 43:669-676
- 32. Davis KL, Davidson M, Mohs RC, et al: Plasma homovanillic acid concentration and the severity of schizophrenic illness. Science 1985; 227:1601–1602
- 33. Bowers MB, Swigar ME, Jatlow PI, et al: Plasma catecholamine metabolites and early response to Haldol. J Clin Psychiatry 1984; 45:248-251
- 34. Antelman SM, Caggiula AR: Norepinephrine-dopamine interactions and behavior. Science 1977; 195:646-653
- 35. Biggio G, Carn H, Corda MG, et al: Stimulation of dopamine synthesis in caudate nucleus by intrastriatal enkephalins and
- antagonism by naloxone. Science 1978; 200:552-554
 36. Hommer DW, Pert A: The actions of opiates in the rat substantia nigra: an electrophysiological analysis. Peptides 1983; 4:603-608
- 37. Hökfelt T, Rehfeld JF, Skirboll L, et al: Evidence for coexistence of dopamine and CCK in mesolimbic neurons. Nature 1980;
- 38. Bannon MJ, Roth RH: Pharmacology of mesocortical dopamine neurons. Pharmacol Rev 1983; 35:53-68

Clinical Correlates of Platelet Prostaglandin Receptor Subsensitivity in Schizophrenia

Philip D. Kanof, M.D., Ph.D., Michael Davidson, M.D., Celeste A. Johns, M.D., Richard C. Mohs, Ph.D., and Kenneth L. Davis, M.D.

A diminished cAMP response to prostaglandin E₁ (PGE₁) in platelets from schizophrenic patients has been demonstrated previously. The authors report that among 35 actively psychotic male schizophrenic patients, the platelet cAMP response to PGE₁ was negatively correlated with global symptom severity and with several indexes of positive symptom severity but not with negative symptom severity. If this subsensitivity of platelet PGE receptors extends to brain PGE receptors, schizophrenic patients may have an impairment in the ability of endogenous PGEs to inhibit dopaminergic transmission. Such impairment could have a permissive effect on the production of psychotic symptoms during exacerbations in schizophrenic patients.

(Am J Psychiatry 1987; 144:1556–1560)

P latelets have been used extensively in the search for biological markers of psychiatric disorders (1, 2). The platelet prostaglandin E receptor linked to adenylate cyclase is one potential biological marker that has been the focus of several studies. Six of seven prior studies found a lower cAMP response to prostaglandin E₁ (PGE₁) in platelets from schizophrenic patients than in those from normal control subjects (3–8). The only study which failed to find this result (9) involved a small number of subjects. Although many of the patients in these studies had received psychotropic medications at various times before measurement of the platelet cAMP response to PGE₁, it seems unlikely that prior drug treatment is responsible for the observed finding. For example, a variety of psychotropic

The subjects were 35 physically healthy men who met the Research Diagnostic Criteria (RDC) (10) for chronic schizophrenia or chronic schizoaffective disorder, mainly schizophrenic. The patients were divided into two subgroups characterized by the state of their illness at the time of the study. The "exacerbated group" consisted of 26 schizophrenic patients with histories of fluctuations in symptom severity who had been admitted because of exacerbations of their chronic schizophrenic illness. The "poor-prognosis group" consisted of nine schizophrenic patients whose illness had relatively little fluctuation. For inclusion in this group, the individual had to have been chronically hospitalized or completely dependent on others for necessities such as food, clothing, and shelter and had

sis patients, 46.1±12.3 years).

The studies were performed at the Bronx Veterans Administration Medical Center under the auspices of the Schizophrenia Biological Research Center and the Mount Sinai School of Medicine, New York. All

to have performed no useful work or have been

unemployed for the preceding 5 years. The mean±SD

age of the schizophrenic patients was 40.2 ± 11.2 years

(exacerbated patients, 38.2±10.7 years; poor-progno-

drugs have been shown not to alter the platelet cAMP response to PGE₁ in vitro (4). In addition, if the cAMP response to PGE₁ were diminished because of neuroleptic treatment, one would expect that this measure would be lower in schizophrenic patients receiving neuroleptics than in those who were drug free. In fact, the opposite has been observed (4). Thus, platelet PGE receptor subsensitivity may be a peripheral manifestation of one component of the pathophysiological processes intrinsic to this disorder.

We now report that the platelet cAMP response to PGE₁ is negatively correlated with a variety of clinical measures of positive symptom severity but not with measures of negative symptom severity. This result suggests an underlying pathophysiological mechanism by which prostaglandin receptor subsensitivity could contribute to the production of psychotic symptoms in schizophrenic patients.

METHOD

Presented at the 41st annual meeting of the Society of Biological Psychiatry, Washington, D.C., May 7–11, 1986. Received Aug. 14, 1986; revised Feb. 18, 1987; accepted May 27, 1987. From the Psychiatry Service, Bronx VA Medical Center; and the Departments of Psychiatry and Pharmacology, Mount Sinai School of Medicine, New York. Address reprint requests to Dr. Kanof, Psychiatry Service (116A), VA Medical Center, 130 West Kingsbridge Rd., Bronx, NY

Supported by grant MH-37654 from NIMH and in part by Schizophrenia Biological Research Center grant 4125-020 from the VA.

The authors thank Thomas Bracco, Mathew Mannini, and Elizabeth McGann for technical assistance.

TABLE 1. Correlation Between Symptom Severity and PGE₁-Stimulated Platelet cAMP Accumulation in Exacerbated Schizophrenic Patients and in Exacerbated Plus Poor-Prognosis Schizophrenic Patients

				om Severity Scor use to 3×10 ⁻⁷ N		
	Schi	Exacerbated zophrenic Pat	Exacerbated and Poor-Prognosis Schizophrenic Patients			
Symptom Severity Measure	r	N	p	r	N	p
CGI	48	24	.017	42	32	.017
BPRS	20	23	.364	23	29	.235
Anxiety-depression	.53	23	.009	.42	31	.019
Anergia	20	23	.357	11	31	.551
Thought disturbance	44	23	.035	41	29	.025
Activation	31	23	.146	34	31	.058
Hostile-suspiciousness	10	23	.650	15	31	.417
"Positive symptoms" ^a	43	23	.043	43	29	.019
Scale for the Assessment of Thought, Language,						
and Communication	61	20	.004	51	28	.006
Global rating of thought disorder	66	20	.002	57	28	.006
Scale for the Assessment of Negative Symptoms	29	17	.256	15	23	.486

^aThe positive symptom score is the sum of the scores on the factors for thought disturbance, activation, and hostile-suspiciousness.

subjects gave written, informed consent for participation in these protocols and were studied while inpatients on the Special Treatment Unit of this hospital. All subjects were drug free for at least 2 weeks and were free of depot neuroleptics for at least 1 month before blood drawing, except for occasional use of chloral hydrate as a hypnotic.

Symptom severity was assessed with the Brief Psychiatric Rating Scale (BPRS) (11) and the Clinical Global Impression (CGI) scale, a one-item measure of global severity of illness that ranges from 1 ("not at all") to 7 ("among the most extremely ill patients"). These ratings were conducted by two experienced raters within 3 days of blood drawing. The scores reported are the averages of the two individual ratings. Thought disorder was assessed with the 19-item Scale for the Assessment of Thought, Language, and Communication (TLC scale) (12) and with the TLC global rating of severity of thought disorder (0=none, 3=severe). Negative symptom severity was assessed with the Scale for the Assessment of Negative Symptoms (SANS) (13, 14). The global scores (ranging from 0 to 5) for each of the subscales of the SANS (affective flattening or blunting, alogia, avolition-apathy, anhedonia-asociality, attentional impairment) were added to yield the total SANS score.

For each subject, between 8:00 and 10:00 a.m. a 45-cc blood sample was drawn with a 19-gauge needle into a plastic syringe containing 0.45 cc of disodium EDTA (pH=7.2) as anticoagulant. The platelets were prepared according to the method of Corash (15) with the modification that a 0.1% concentration of disodium EDTA was present throughout the fractionation procedure, as described previously (8). For the measurements of cAMP accumulation, aliquots of platelets were added in duplicate to tubes containing the phosphodiesterase inhibitor 3-isobutyl-1-methylxanthine (final concentration=1 mM). Platelet cAMP accumulation was routinely measured in the absence of

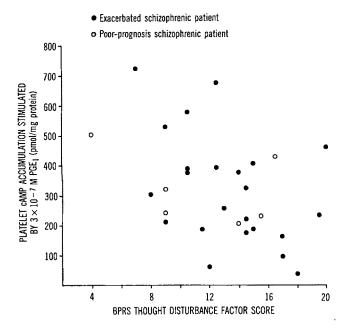
PGE₁ and in the presence of submaximal $(3\times10^{-7} \text{ M})$ and maximal (10^{-5} M) concentrations of PGE. The incubation was initiated by the addition of the platelets, carried out in a shaking water bath for 3 minutes at 37°C, and terminated by placing the tubes in a boiling water bath for 2 minutes. Aliquots of each sample were assayed in duplicate for cAMP according to the method of Brown et al. (16), and protein concentration was determined with the method of Lowry et al. (17). The values reported for basal and PGE₁-stimulated cAMP accumulation represent the net accumulations during the 3-minute incubation.

The intra-assay coefficients of variation for the basal and PGE₁-stimulated platelet cAMP accumulations were 16% and 13%, respectively. The interassay coefficient of variation for cAMP measurement was 9%. Among normal control subjects, the intraclass correlation coefficient for measurements of PGE₁-stimulated cAMP accumulation in platelets from two separate blood drawings 1 week apart was .93. The assays were performed by technicians blind to the clinical data.

RESULTS

Analyses of the correlations between the symptom severity measures and the platelet cAMP response to PGE₁ were performed on the data from the exacerbated schizophrenic patients and those from the exacerbated and poor-prognosis schizophrenic patients together. The relationships between the platelet cAMP accumulation stimulated by 3×10^{-7} M PGE₁ and the measures of symptom severity are presented in table 1. There was a significant negative correlation between the cAMP response to 3×10^{-7} M PGE₁ and the global severity of illness as measured by the CGI scale. However, the correlation between this biological variable and another measure of symptom severity, the BPRS score, was not statistically significant. This ap-

FIGURE 1. Relationship Between BPRS Thought Disturbance Factor Score and PGE₁-Stimulated Platelet cAMP Accumulation in Exacerbated and Poor-Prognosis Schizophrenic Patients



parent discrepancy may be resolved in part by examining the relationship between the cAMP response to PGE₁ and the symptom subsets represented by the BPRS factors, which have previously been empirically validated (11). There was a significant negative correlation between the cAMP response to 3×10^{-7} M PGE₁ and the score on the BPRS thought disturbance factor (figure 1). This factor includes conceptual disorganization, grandiosity, hallucinatory behavior, and unusual thought content. A positive symptom score was obtained from the BPRS by adding the scores on the factors for thought disturbance, activation (constructed from the tension, mannerisms and posturing, and excitement items), and hostile-suspiciousness (constructed from the hostility, suspiciousness, and uncooperativeness items). There was a significant negative correlation between the cAMP response to 3×10^{-7} M PGE₁ and the BPRS positive symptom score. In contrast, the cAMP response to PGE_1 was highly positively correlated with the score on the anxiety-depression factor of the BPRS.

Similar relationships were observed between these measures of symptom severity and the platelet cAMP response to 10^{-5} M PGE₁. For the exacerbated patients, the cAMP response to 10^{-5} M PGE₁ was negatively correlated with the CGI score (r=-.45, N=26, p=.021), the BPRS thought disturbance factor score (r=-.33, N=24, p=.12), and the BPRS positive symptom score (r=-.33, N=24, p=.11), but these correlations were less robust than the correlations of symptom severity with the cAMP response to 3×10^{-7} M PGE₁. Similarly, for the exacerbated and poorprognosis schizophrenic patients together, the cAMP response to 10^{-5} M PGE₁ was negatively correlated

with the CGI score (r=-.38, N=35, p=.026), the BPRS thought disturbance factor score (r=-.32, N=31, p=.082), and the BPRS positive symptom score (r=-.37, N=31, p=.042).

The relationships between the platelet cAMP response to PGE1 and measures of thought disorder were investigated by using scores on the TLC scale. There were highly significant negative correlations between the platelet cAMP response to 3×10⁻⁷ M PGE₁ and the TLC scale score and the TLC global rating. Similar relationships were found between these measures of thought disorder and the platelet cAMP response to 10^{-5} M PGE₁. For the exacerbated patients, the platelet cAMP response to 10⁻⁵ M PGE₁ was negatively correlated with the TLC scale score (r=-.54, N=20, p=.014) and the TLC global rating (r=-.60, N=20, p=.006). For the exacerbated and poor-prognosis patients together, the platelet cAMP response to 10⁻⁵ M PGE₁ also negatively correlated with the TLC scale score (r=-.40, N=29, p=.033) and the TLC global rating (r=-.48, N=29, p=.008).

In contrast, no significant relationships were observed between the platelet cAMP response to PGE₁ and negative symptom severity as measured by the SANS. Among the five subscales of the SANS, a significant correlation was observed only between the cAMP response to 3×10^{-7} M PGE₁ and the degree of affective blunting in the exacerbated patients (r=-.54, N=18, p=.021). The correlation between affective blunting and the cAMP response to 3×10^{-7} M PGE₁ was not significant at the p=.05 level when the poorprognosis patients were added to the sample, nor was the correlation between affective blunting and the cAMP response to 10^{-5} M PGE₁ statistically significant for either grouping of patients.

DISCUSSION

The present study concerns the relationships between the platelet cAMP response to PGE₁ and measures of symptom severity among actively psychotic schizophrenic patients. Biochemical measures of PGE receptor sensitivity were significantly negatively correlated with scores on a variety of different measures of positive symptom severity, including the thought disturbance factor of the BPRS, a BPRS positive symptom score constructed from the three factors involving symptoms and behaviors commonly seen in actively psychotic patients, and the TLC scale. In addition, the platelet cAMP response to PGE₁ was significantly negatively correlated with the CGI score. Although the CGI scale is supposed to be an index of global symptom severity, in practice its scoring is heavily influenced by the presence and intensity of active psychotic symptoms. In contrast, the platelet cAMP response to PGE₁ was not correlated with a measure of negative symptom severity. How might these findings shed light on the possible contribution of this biological variable to the pathophysiological mechanisms underlying

schizophrenia? We propose one interpretation of these data based on the known physiological actions of PGEs as endogenous modulators of dopaminergic transmission in the CNS.

The dopamine hypothesis has dominated recent biological research in schizophrenia (18). Initial support for this hypothesis was based primarily on pharmacological evidence. Drugs that enhance dopaminergic activity, such as amphetamine, increase symptom severity (19, 20), and drugs that block brain dopamine receptors, such as neuroleptics, ameliorate symptom severity in actively psychotic schizophrenic patients (21, 22). Recent neurochemical studies have provided more direct evidence for dopaminergic hyperactivity in schizophrenia. It has been shown that plasma homovanillic acid levels, which may preferentially reflect the functional activity of mesocortical dopaminergic systems, correlate with symptom severity among actively psychotic schizophrenic patients (23, 24).

Individual subsets of symptoms seen in schizophrenic patients may have differing degrees of responsiveness to drugs that perturb brain dopaminergic systems (25). For example, amphetamine's clinical effect of exacerbating symptom severity in actively psychotic schizophrenic patients is much more robust for positive than for negative symptoms (26). Most of the studies demonstrating the efficacy of dopamine receptor antagonists for actively psychotic schizophrenic patients employed outcome measures that are heavily influenced by the presence and intensity of positive symptoms. It has thus been proposed that increased functional activity of brain dopaminergic systems may contribute to the production of positive symptoms in schizophrenic patients. As a corollary, an alteration in any process that modulates synaptic transmission at relevant dopaminergic synapses might be expected to influence the expression and severity of positive symptoms in schizophrenic patients.

Prostaglandins of the E series may function as endogenous neuroleptics by antagonizing synaptic transmission at brain dopaminergic synapses. The action of dopamine at its receptor sites induces a cascade of biochemical events leading to the synthesis and release of PGEs (27, 28). PGEs, acting at specific receptor sites, may provide a "braking mechanism" for dopaminergic transmission. PGEs act presynaptically to inhibit depolarization-induced release of dopamine (29, 30) and postsynaptically to antagonize the physiological effects of dopamine. Data from animal studies indicate that injection of PGEs into the striatum antagonizes the functional effects of dopamine-releasing drugs (31-33), such as amphetamine, and of dopamine receptor agonists (34), such as apomorphine. Furthermore, injection of PGEs into the striatum potentiates the behavioral effects of antipsychotic drugs (33). Conversely, drugs that block brain PGE synthesis, such as indomethacin, potentiate certain physiological effects of the dopamine-releasing drug amphetamine (35–37).

The pharmacological and biochemical evidence dis-

cussed previously supports an association of increased dopaminergic activity with the production of positive symptoms in schizophrenia. If the subsensitivity of PGE receptors in the platelets of schizophrenic patients that we (8) and others (3-7) have demonstrated extends to the PGE receptors in brain which medulate dopaminergic transmission, schizophrenic patients may have an impairment in the ability of locally released PGEs to act as neuromodulators in one important local negative feedback mechanism that normally provides a brake on dopaminergic transmission. Subsensitivity of brain PGE receptors might then have a permissive effect on the production of some psychotic symptoms. The greater the degree of PGE receptor subsensitivity, the less effective the brake on dopaminergic transmission by endogenous PGEs and the greater the severity of positive symptoms. This model is supported by our data. We have demonstrated that the degree of sensitivity of the PGE receptor is negatively correlated with several different aspects of positive symptom severity in actively schizophrenic patients. Caution is required, however, before extending a finding obtained with tissues peripheral to brain. If the PGE receptor subsensitivity obserzed in platelets is genetically determined, similar PGE receptor subsensitivity might be manifested in all t ssues, including brain. Still, the relationship between the sensitivity of PGE receptors in platelets and brain remains to be determined empirically.

The experimental evidence needed to evaluate the potential significance of platelet PGE₁ receptor sensitivity as a biological marker for psychiatric disor lers is incomplete. Studies by other investigators (38) and ourselves (8) have shown that platelet PGE receptor subsensitivity is not limited to schizophrenia. It is possible that platelet PGE receptor subsensitivity may represent a marker for vulnerability to psychosis independent of the underlying psychiatric disorder present. Recent studies have demonstrated an increased prevalence of several different types of psychotic disorders in the families of schizophrenic probands (39). One interpretation of this result is that a single biological factor which influences the production of psychotic symptoms may be common to schizophrenia and other types of psychiatric disorders. It would be interesting to study the clinical correlates of PGE₁-stimulated platelet cAMP accumulation in other psychotic disorders (e.g., brief reactive psychosis, paranoid psychosis) and in psychiatric disorders that exist in psychotic and nonpsychotic forms (e.g., mania, major depressive disorder). Studies of PGE₁-stimulated platelet cAMP accumulation in patients with many different types of psychiatric disorders will contribute to the understanding of the functional significance of this potential biological marker.

REFERENCES

 Stahl SM: The human platelet—a diagnostic and research tool for the study of biogenic amines in psychiatric and neurological disorders. Arch Gen Psychiatry 1977; 34:509–516

- Elliott JM: Platelet receptor binding studies in affective disorders. J Affective Disord 1984; 6:219–239
- Kafka MS, van Kammen DP, Bunney WE Jr: Reduced cyclic AMP production in the blood platelets from schizophrenic patients. Am J Psychiatry 1979; 136:685-687
- Rotrosen J, Miller AD, Mandio D, et al: Prostaglandins, platelets and schizophrenia. Arch Gen Psychiatry 1980; 37: 1047–1054
- Kafka MS, van Kammen DP, Kleinman JE, et al: α-Adrenergic receptor function in schizophrenia, affective disorders, and some neurological diseases. Commun Psychopharmacol 1980; 4:477–486
- Garver DL, Johnson C, Kanter DR: Schizophrenia and reduced cyclic AMP production: evidence for the role of receptor-linked events. Life Sci 1982; 31:1987–1992
- Kafka MS, van Kammen DP: α-Adrenergic receptor function in schizophrenia. Arch Gen Psychiatry 1983; 40:264–270
- Kanof PD, Johns CA, Davidson M, et al: Prostaglandin receptor sensitivity in psychiatric disorders. Arch Gen Psychiatry 1986; 43:987–993
- Pandey GN, Garver DL, Tamminga C, et al: Postsynaptic supersensitivity in schizophrenia. Am J Psychiatry 1977; 134: 518-522
- Spitzer RL, Endicott J, Robins E: Research Diagnostic Criteria: rationale and reliability. Arch Gen Psychiatry 1978; 35:773–782
- Overall JE, Gorham DR: The Brief Psychiatric Rating Scale. Psychol Rep 1962; 10:799-812
- 12. Andreasen NC: Thought, language, and communication disorders, I: clinical assessment, definition of terms, and evaluation of their reliability. Arch Gen Psychiatry 1979; 36:1315-1321
- Andreasen NC: Scale for the Assessment of Negative Symptoms (SANS). Iowa City, University of Iowa, 1981
- Andreasen NC: Negative symptoms in schizophrenia. Arch Gen Psychiatry 1982; 39:784–788
- Corash L: Platelet heterogeneity: relevance to the use of platelets to study psychiatric disorders. Schizophr Bull 1980; 6:254– 258
- 16. Brown BL, Albano JD, Ekins RP, et al: A simple and sensitive saturation assay method for the measurement of adenosine 3': 5'-cyclic monophosphate. Biochem J 1971; 121:561–562
- Lowry OH, Rosebrough NJ, Farr AL, et al: Protein measurement with the Folin phenol reagent. J Biol Chem 1951; 193: 265-275
- 18. Haracz JL: The dopamine hypothesis: an overview of studies with schizophrenic patients. Schizophr Bull 1982; 8:438-469
- Janowsky DS, Davis JM: Methylphenidate, dextroamphetamine, and levamphetamine: effects on schizophrenic symptoms. Arch Gen Psychiatry 1976; 33:304–308
- Angrist B, Rotrosen J, Gershon S: Responses to apomorphine, amphetamine, and neuroleptics in schizophrenic subjects. Psychopharmacology (Berlin) 1980; 67:31–38
 Creese I, Burt DR, Snyder SH: Dopamine receptor binding
- Creese I, Burt DR, Snyder SH: Dopamine receptor binding predicts clinical and pharmacological potencies of antischizophrenic drugs. Science 1976; 192:481

 –483
- Snyder SH: Dopamine receptors, neuroleptics, and schizophrenia. Am J Psychiatry 1981; 138:460

 –464

- Pickar D, Labarca R, Linnoila M, et al: Neuroleptic-induced decrease in plasma homovanillic acid and antipsychotic activity in schizophrenic patients. Science 1984; 225:954–957
- Davis KL, Davidson M, Mohs RC, et al: Plasma homovanillic acid concentration and the severity of schizophrenic illness. Science 1985; 227:1601–1602
- Andreasen NC: Positive vs negative schizophrenia: a critical evaluation. Schizophr Bull 1985; 11:380–389
- Angrist B, Rotrosen J, Gershon S: Differential effects of amphetamine and neuroleptics on negative vs positive symptoms in schizophrenia. Psychopharmacology (Berlin) 1980; 72:17–20
- schizophrenia. Psychopharmacology (Berlin) 1980; 72:17-20 27. Hillier K, Roberts PJ, Woollard PM: Catecholamine-stimulated prostaglandin synthesis in rat brain synaptosomes (proceedings). Br J Pharmacol 1976; 58:426P-427P
- Schaefer A, Komlos M, Seregi A: Effects of biogenic amines and psychotropic drugs on endogenous prostaglandin synthesis in the rat brain homogenates. Biochem Pharmacol 1978; 27:213– 218
- Bergstrom S, Farnebo LO, Fuxe K: Effect of prostaglandin E₂ on central and peripheral catecholamine neurons. Eur J Pharmacol 1973; 21:362–368
- Westfall TC, Kitay D: The effects of prostaglandins on the release of ³H-dopamine from superfused slices of rat striatum following electrical stimulation. Proc Soc Exp Biol Med 1977; 155:305-307
- 31. Nielsen JA, Sparber SB: A comparative study of the effects of prostaglandins and d-amphetamine on the metabolism of ³Hdopamine continuously presented to rat brain in vivo. Pharmacol Biochem Behav 1984; 21:583–589
- Schwarz RD, Uretsky NJ, Bianchine JR: Prostaglandin inhibition of amphetamine-induced circling in mice. Psychopharmacology (Berlin) 1982; 78:317–321
- 33. Poddubiuk ZM, Kleinrok Z: A comparison of the central actions of prostaglandins A₁, E₁, E₂, F_{1 α}, and F_{2 α} in the rat, II: the effect of intraventricular prostaglandins on the action of some drugs and on the level and turnover of biogenic amines in the rat brain. Psychopharmacology (Berlin) 1976; 50:95–102
- Schwarz RD, Uretsky NJ, Bianchine JR: Prostaglandin inhibition of apomorphine-induced circling in mice. Pharmacol Biochem Behav 1982; 17:1233–1237
- Sever PS, Trelinski M: The effects of indomethacin on the development of tolerance to amphetamine-induced hyperthermia: are prostaglandins involved? J Pharm Pharmacol 1974; 26:655-657
- Caldwell J, Putnam JL: The potentiation of certain effects of amphetamine by inhibitors of prostaglandin synthesis (proceedings). Br J Pharmacol 1975; 54:249P-250P
- 37. Nielsen JA, Sparber SB: Indomethacin potentiates the operant behavior suppressant and rectal temperature lowering effects of low doses of d-amphetamine in rats. Pharmacol Biochem Behav 1984; 21:219-224
- 38. Siever LJ, Kafka MS, Targum S, et al: Platelet alpha-adrenergic binding and biochemical responsiveness in depressed patients and controls. Psychiatry Res 1984; 11:287–302
- Kendler KS, Gruenberg AM, Tsuang MT: Psychiatric illness in first-degree relatives of schizophrenic and surgical control patients. Arch Gen Psychiatry 1985; 42:770–779

Prevalence of Depression and Distress in a Large Sample of Canadian Residents, Interns, and Fellows

Kirby Hsu, M.D., and Victor Marshall, Ph.D.

Using data from 1,805 interns, residents, and fellows in Ontario, Canada, the authors report the prevalence of symptoms measured by the Center for Epidemiologic Studies Depression Scale (CES-D). They found that the proportion of subjects scoring as depressed was somewhat higher than that found in community studies. Women had higher depression scores than men. The proportion of unmarried house staff with moderate or severe depression scores was higher than that of married house staff. Considerable differences were found by specialty, and depression was most prevalent in the first year of postgraduate training. These findings have implications for those who direct postgraduate medical training or who seek to alleviate unnecessary stress in the postgraduate education experience.

(Am J Psychiatry 1987; 144:1561-1566)

Postgraduate training is a period during which the young physician masters the tasks of becoming a competent professional, continues to form his or her personal identity, may develop an intimate relationship, and may start a family. Some studies (1–5) suggest that there is a greater incidence of depression during internship and residency. Most studies examining postgraduate education, however, are limited by small sample size or because they are based on one hospital or one specialty. In this paper we draw on a study of a large sample of interns, residents, and fellows to examine measures of depressive symptoms

Presented at the 140th annual meeting of the American Psychiatric Association, Chicago, May 9-14, 1987. Received Oct. 9, 1986; revised June 1, 1987; accepted July 27, 1987. From the Departments of Behavioural Science and Psychiatry, University of Toronto. Address reprint requests to Dr. Marshall, Department of Behavioural Science, University of Toronto, Toronto, Ont., Canada M5S 1A8.

Funded by grant 01308 for the Work and Wellbeing Study from the Ontario Ministry of Health; by the Professional Association of Internes and Residents of Ontario; by the Faculty of Medicine, University of Toronto; and by Health and Welfare Canada through a Health Scientist Award to Dr. Marshall.

The authors thank Joanne Daciuk for assistance with computer analysis.

Reports from the Work and Wellbeing Study are the responsibility of the authors and do not necessarily reflect the policies of the funding agencies.

Copyright © 1987 American Psychiatric Association.

and emotional distress from all specialties, years of training, and different university centers in the province of Ontario.

METHOD

Research Design and Sample

The Physician-at-Risk Committee of the Professional Association of Internes and Residents of Ontario, in collaboration with the Department of Behavioural Science of the University of Toronto, conducted a survey of interns, residents, and fellows in Ontario in the 1984–1985 academic year. The survey examined various aspects of the lives of those in postgraduate training, including personal and work stressors, personality dimensions, social support, and physical, psychological, and social well-being. This was a multiple-methods study involving mailed questionnaires and in-depth interviews. In this paper we draw on selected data from the results of the mail survey.

From a mailing list provided by the Professional Association of Internes and Residents of Ontario, 2,620 interns, residents, and fellows in Ontario were mailed a 34-page questionnaire in November 1984. Extensive follow-up using mail and telephone contacts over a 7-month period yielded a high response rate from all specialties and years of training. Of 2,620 potential respondents provided on the mailing list, 477 could not be confirmed to have received the questionnaire and could not be located through extensive searches. Of the remaining 2,143 potential respondents, 1,805 completed questionnaires, yielding a response rate of 84% and a completion rate of 69% for the entire mailing list.

The respondents included 1,197 (66%) men and 608 (34%) women; their mean±SD age was 29±4.21 years; 1,001 (55%) were married, 653 (36%) were single, and 146 (8%) were separated, divorced, widowed, or living with someone. Almost two-thirds (63%, N=1,138) had been graduated from an Ontario medical school, 17% (N=298) from another Canadian medical school, and 20% (N=354) from a non-Canadian medical school. The majority of respondents (60%, N=1,075) were currently affiliated with the University of Toronto; the remainder were spread over

TABLE 1. Scores on the Center for Epidemiologic Studies Depression Scale (CES-D) in Studies Using Community, University, and Patient Samples

			CES-D S	Score≥1	6 (%)	Mear	Total So	ore
Study	Location and/or Description of Sample	N	Women	Men	Total	Women	Men	Total
Community samples								
Roberts and Vernon (9)	Alameda County, Calif.	514	_		16.3		_	
Radloff (6)	Kansas City, Mo., and Washington							
` ,	County, Md.	2,514			19.0	_	_	9.25
	Washington County	1,060	_	_	15.0			8.17
	Kansas City and Washington County	1,422	_	_	15.0		_	7.94
Clark et al. (11)	Los Angeles County, Calif.	1,000	23.5	12.9		10.40	7.60	
Comstock and Helsing (12)	Kansas City and Washington County	3,845	19.5	16.5	18.2	_		
Myers and Weissman (7)	New Haven, Conn.	514			8.7	_		8.45
Lin and Ensel (13)	Albany, Schenectady, and Troy, N.Y.	871	_	_			_	8.65
Weissman et al. (14)	Kansas City and Washington County	3,932		_		9.93	7.90	9.10
University sample	,	•						
Devins et al. (unpublished)	University students, Calgary, Alberta,							
,	Canada	157	_	_			_	14.40
Patient samples								
Radloff (6)	Private psychiatric facility, Washington							
	County	70	_	-	70.0		_	24.42
Barnes and Prosen (10)	General practitioners' offices, Winnipeg,							
,	Brandon, and Virden, Manitoba, Canada	1,250	35.4	28.8	33.2			
Weissman et al. (14)	Connecticut Mental Health Center, Yale	,						
	University, New Haven	406		_	*****	22.38	21.26	21.19
Devins et al. (unpublished)	Family practice patients, Calgary	165	_		w		_	16.46
(<u>F</u>	Progressive renal disease patients, Calgary	101	_			_	_	17.33
	End-stage renal disease patients, Calgary	125		_			_	13.65
	Cancer patients, Calgary	111					_	15.66

the other four Ontario medical schools. About onethird of the respondents were in their first year of postgraduate training. In terms of specialties, internal medicine (14%, N=239), surgery (10%, N=180), and family practice (16%, N=289) had the largest percentages of respondents.

Measurement of Depression and Emotional Distress

The Center for Epidemiologic Studies Depression Scale (CES-D) (6) was used to measure depressive symptoms and emotional distress. The CES-D was designed to measure current levels of depressive symptoms in noninstitutionalized adult populations. The 20 items in the CES-D (6) were selected from a pool of items from previously validated depression indexes such as the MMPI and from depression scales developed by Zung, Beck et al., Raskin et al., and Gardner. The symptoms from the scale can be grouped into negative affect, positive affect, somatic and retarded activity, and interpersonal items. Subjects are asked to indicate the frequency with which they experienced each symptom during the past week. Response categories are ordinal and range from 0 (rarely or none of the time) to 3 (most or all of the time). The values of the response categories are reversed for the positive affect items. The total score is the sum of the scores across the 20 items and can range in value from 0 to 60.

When the total score is used, cutoff points provide an overall index of symptoms (6–10). A score of 0–15 is considered to indicate no depression, 16–20 indicates mild depression, 21–30 indicates moderate depression, and a score of 31 or more indicates severe depression. Thus, to be considered as having mild depression, a respondent would have to report five symptoms occurring as often as on 5 of the previous 7 days or some combination of more symptoms with less frequency.

The precise meaning of elevated CES-D scores has not yet been established. Given the findings by Devins and Orme (8) that the scale's focus is not limited exclusively to depressive symptoms, it cannot be interpreted as indicating presence or absence of the clinical syndrome of depression. Devins and Orme suggested that it would be more reasonable to assert that CES-D scores provide a useful index of the more general construct of emotional distress. Hence, we use the terms "depression" and "distress" separately and together interchangeably in this paper. It may also be noted that the CES-D categories do not conform to DSM-III criteria for affective disorder.

Using the scale as a unidimensional measure, other investigators (6, 7, 9, 11–14; unpublished 1986 paper of G.M. Devins et al.) have classified different community-dwelling, nonclinical populations. These results, which are summarized in table 1, provide a context in which to place the levels of depression found in Ontario interns and residents. According to these studies, as evidenced by scores of 16 or more on the CES-D, the proportion of a general population of adults that would be judged to have any depression or emotional distress was between 9% and 19%, with an average of about 15%. A higher percentage of women had a score of 16 or over; their average score was

6.8% higher than that of men. The mean CES-D scores for community populations ranged from 7.94 to 9.25, with an average of 8.59. Devins et al. (unpublished 1986 paper) found a higher mean score—14.40—in a group of 157 healthy university students.

Table 1 also shows the results of studies using different patient populations (6, 10, 14; unpublished 1986 paper of Devins et al.). The proportion of the patient populations scoring 16 or higher on the CES-D ranged from 33% to 70%, with an average of 51.6%. The mean scores ranged from 13.65 to 24.42, with an average of 18.12. As in the general population, a higher percentage of women than men had a score of 16 or more.

Analysis

The frequency distribution of depression in our overall sample was first computed by classifying the respondents into none, mild, moderate, and severe categories. Data analyses were performed for women and men, by year of postgraduate training controlled for sex, and by specialties controlled for sex. Data analyses were performed by using standard programs from the Statistical Package for the Social Sciences (SPSS-X) (15). Because of the large number of respondents available for analysis, statistically significant relationships would often be found with very small substantive differences. We therefore used measures of the strength of association. Cramer's V, Somer's d, and Kendall's tau were used in analyses involving tables that were larger than 2 by 2. Cramer's V provides a measure of association for nominal variables; values range between +1 and -1, and higher values indicate a higher degree of association (16). Somer's d is a rank-order measure of association suitable for comparisons involving a two-value nominal variable and an ordinal variable. Kendall's tau is similar to Somer's d but for the cross-classification of two ordinal variables (16–18).

RESULTS

Four hundred fifteen (23%) of the 1,805 respondents showed some degree of depression and emotional distress. The mean±SD CES-D score of all 1,805 respondents was 10.49±8.782; the range of scores was 0–52. The 415 respondents who scored 16 or over could be classified into three categories—181 (44%) were mildly depressed, 162 (39%) were moderately depressed, and 72 (17%) were severely depressed. Table 2 shows a breakdown of CES-D scores by sex. Women were 1.5 times more likely than men to be classified as depressed; 10.8% more women than men scored 16 or more. Women were also three times as likely to fall into the severely depressed category.

Analysis controlling for other demographic variables showed low correlations between CES-D scores and age (Kendall's tau=-0.0056) or marital status

TABLE 2. Scores on the Center for Epidemiologic Studies Depression Scale (CES-D) of 1,785 Male and Female Canadian Pesidents, Interns, and Fellows^a

CES-D	Level of Depression or		men :601)		len 1,184)	Total (N = 1,785)		
Score	Distress	N	%	N	%	N	%	
015	None	421	70.0	957	80.8	1,3'78	77.2	
16-20	Mild	70	11.6	115	9.7	185	10.4	
21-30	Moderate	66	11.0	86	7.3	1.72	8.5	
31 or more	Severe	44	7.3	26	2.2	0	3.9	

^aData were missing for 20 of the 1,805 respondents; Somer's d for comparison by sex = 0.1457.

(Somer's d=0.0880). However, there was a higher percentage of single respondents than married respondents in each of the mild, moderate, and severe distress categories (table 3). The mean CES-D score for single women was 14.28, compared with 11.5 for married women; it was 10.72 for single men, compared with 8.67 for married men. It is interesting to note that women again scored higher than men even when marital status was controlled (table 3).

We examined differences in CES-D scores by specialties, collapsing all residents into 11 major categories and retaining interns and fellows as separate categories. Because of the differences in the proportion of men and women in various specialties, t was necessary to control for sex. The results of these data are shown in table 4.

Considering first the 1,162 men available for comparison, we found that interns were the most likely to receive CES-D scores indicating at least mild depression, followed closely by residents in obstetrics and gynecology, radiology, and anesthesiology. No male community health residents received scores of 16 or more, but the small number of male community health residents (N=7) renders this figure unstable. Research fellows and emergency medicine residents stood out as having very low scores. When we examined the mean CES-D scores for specialties among the male respondents, residents in obstetrics and gynecology had the highest average, followed by interns and residents in psychiatry.

Examining data from 585 female house staff, we found that, as with male house staff, interns had the highest percentage scoring in the depressed range. The fact that almost four out of 10 female interns fell into the 16 or more category is cause for considerable concern. Setting aside the small groups of women in community health residency programs and in emergency medicine, where the numbers are so small as to make generalization hazardous, the other specialties associated with high proportions of women scoring as depressed were surgery, pediatrics, psychiatry, and obstetrics and gynecology. The specialty whose low rate stood out was radiology. Looking at the nean CES-D scores for specialties in the female respondents, we found that interns had the highest average, fol-

TABLE 3. Scores on the Center for Epidemiologic Studies Depression Scale (CES-D) of 1,636 Married and Unmarried Canadian Residents, Interns, and Fellows^a

CES-D Score			Wo	men			Men		
	Level of Donnession	Single (N=258)		Married (N=280)		Single (N=388)		Married (N=710)	
	Level of Depression or Distress	N	%	N	%	N	%	N	%
0–15	None	165	64.0	210	75.0	295	76.0	591	83.2
16-20	Mild	33	12.8	28	10.0	39	10.1	68	9.6
21–30	Moderate	38	14.7	24	8.6	43	11.1	38	5.4
31 or more	Severe	22	8.5	18	6.4	11	2.8	13	1.8

^aData on 169 of the 1,805 respondents were missing; Somer's d for comparison of women by marital status = 0.1124; Somer's d for comparison of men by marital status = 0.0772.

TABLE 4. High Scores on the Center for Epidemiologic Studies Depression Scale (CES-D) Among Canadian Residents in 11 Specialties, Fellows, and Interns^a

		Men (N=1,162)	1		Wome	n (N=585)			
		С	ES-D Scor	e≥16	****	C	ES-D Scor	e≥16	Ratio of Women		
Group	N	N	%	Mean score	N	N	%	Mean Score	In Specialty	Depressed Subjects Only	
Residents	808				431						
Anesthesia	70	15	21.4	9.69	30	7	23.3	10.87	0.43	1.09	
Internal medicine	164	29	17.7	9.23	72	16	22.2	10.57	0.44	1.25	
Community medicine	7	0	0.0	4.57	5	2	40.0	18.40	0.71		
Radiology	55	12	21.8	9.95	20	2	10.0	8.20	0.36	0.46	
Emergency medicine	17	2	11.8	8.53	4	0	0.0	8.00	0.24		
Family practice	139	28	20.1	8.98	147	41	27.9	12.42	1.06	1.39	
Pediatrics	48	7	14.6	8.98	47	17	36.2	12.51	0.98	2.48	
Psychiatry	76	15	19.7	10.16	48	16	33.3	14.08	0.63	1.69	
Obstetrics-gynecology	32	8	25.0	11.13	18	6	33.3	13.22	0.56	1.33	
Surgery	160	27	16.9	9.13	19	7	36.8	12.47	0.12	2.18	
Pathology	40	8	20.0	8.25	21	6	28.6	11.24	0.53	1.43	
Fellows	139	15	10.8	7.28	38	8	21.1	10.47	0.27	1.95	
Interns	215	56	26.0	11.04	116	44	37.9	14.91	0.54	1.46	

^aData on 58 of the 1,805 respondents were missing.

lowed by residents in psychiatry and residents in obstetrics and gynecology.

As noted earlier, women were 1.5 times as likely as men to fall into the depression range of scores. This sex difference was not systematic, however, as can be seen by comparing mean scores (see table 4). Table 4 also records the female-to-male ratios for depression and for the sex of residents in each specialty. Comparing these ratios showed that there was no consistent pattern between the relative number of male or female residents in a specialty and the number of them who were depressed. It is tempting, for example, to argue that the high depression rates of female residents in surgery can be attributed to the fact that they were a relatively isolated minority in that specialty. However, rates of depression for women were relatively higher in pediatrics, which had an equal proportion of male and female residents, and the rates of depression for female residents in radiology were half those of the male radiology residents, even though women were underrepresented in this specialty.

When we examined CES-D scores by year of training, house staff in their first year of postgraduate training—interns and first-year family practice resi-

dents in Ontario—had the highest proportion of depressed respondents (31.2%). There was a slight trend for decline from internship through the years of residency, with the lowest proportion in fellowship (16.7%) (Somer's d=0.1319). A higher percentage of female than of male house staff in each year scored in the depressed range.

Although our data analyses about possible antecedent factors were not extensive, we examined the relationship between CES-D scores and several single indicators. We found no correlation between CES-D scores and socioeconomic status of the respondent's father (Kendall's tau=0.0100) or mother (Kendall's tau=0.0155), family history of contact with a clinical psychologist, psychiatrist or social worker (Kendall's tau=0.0376), or treatment of a family member for alcohol-related problems (Kendall's tau=0.0234).

Of all 1,805 house staff, 153 (8.5%) reported having received help from a psychologist, psychiatrist, or social worker before entering medical school, but this was unrelated to CES-D scores (Kendall's tau=0.0317). On the other hand, there was a weak relationship between CES-D scores and having sought professional help because of stress-related problems,

anxiety, or depression while an intern, resident, or fellow (Kendall's tau=0.2735). However, 30 (42%) of the 72 severely depressed respondents and 105 (65%) of the 162 moderately depressed respondents reported not having sought such help while in postgraduate education.

DISCUSSION

The results of this study showed that 23% of house staff in Ontario had some degree of distress or depression, which is higher than the average of 15% reported in community studies. The level of distress as indicated by the mean CES-D score (10.49) was also slightly higher than that of community samples (8.59) but lower than the mean score (14.40) from the study of 157 university students by Devins et al. (unpublished 1986 paper). The higher score in that study may be related to the larger proportion of women (59%) and unmarried subjects (83%) in their sample.

The CES-D cannot be used for clinical diagnosis and has not been correlated with changes in level of functioning. Hurwitz et al. (19) reported that 14% of house staff in British Columbia were identified as "psychiatric cases" using the Middlesex Hospital Questionnaire; they classified this group as "impaired." This result approximates our finding of 13% if we combine the moderate and severe categories.

A higher percentage of women scored in the depressed range in the total sample and in the comparisons by marital status, year of training, and specialties—with the exception of radiology. This replicates findings of other studies showing that women consistently score higher than men on the CES-D (10, 11, 14). The precise interpretation of this finding of sex difference is unclear. Clark et al. (11) concluded from their analysis of the effects of sex on CES-D scores that it is difficult to determine if this difference in patterns of response constitutes measurement bias or a real difference in symptoms. Barnes and Prosen (10), on the other hand, felt that the "biological hypothesis" warrants the most consideration.

The three major sources of unique stress for female physicians are prejudice, lack of role models, and role strain (20). Smith et al. (21) reported from their survey of 274 program directors in internal medicine that the incidence of impairment was approximately twice as common in female residents. Hurwitz et al. (19), using Middlesex Hospital Questionnaire criteria, also found that impairment was twice as common in female house staff. If we combined moderate and severe categories in our data and classified these respondents as "impaired," the results show that women were almost twice as likely to fall into this "impaired" category. All these findings suggest that the female house staff may indeed be twice as much at risk as the male house staff.

Some authors (22, 23) have suggested that marriage for women physicians can be more stressful than supportive. Our data indicate that being married was associated with less distress for both men and women. We also replicated the finding that single female house staff were more at risk than married women, single men, and married men (19).

Our finding that 30% of all interns and almost 40% of female interns showed some degree of der ression and distress confirms results of other studies of depression in internship (24, 25). Unfortunately, the CES-D was developed to assess point prevalence of depressive symptoms. This prevents us from drawing any conclusions about the persistence of symptoms or how they might change with time. Persistent distress is much more serious than transient symptoms and requires greater intervention. Our results show that the majority of the mildly to moderately distressed respondents were not receiving help and that only about half of the severely distressed reported seeking help while in post-graduate education. These data, then, have strong implications for postgraduate training directors and those setting up programs to help house staff cope better with stress.

There was no correlation between CES-D scores and the limited number of predisposing factors analyzed—contact with mental health professionals before medical school, family history of contact with mental health professionals, family history of alcohol problems, or socioeconomic status of the parents. These findings do not seem to support previous speculations on the importance of the predisposed individual—what has been called the "bent twig" hypothesis (26, 27). The lack of strong association between distress and demographic variables suggests that the factors contributing to depression and psychological distress in residency may lie in the domains of work, personal stressors, personality, and social support. Future analyses of our data will turn to examination of these areas.

- Garfinkel PE, Waring EM: Personality, interests, and emotional disturbance in psychiatric residents. Am J Psychiatry 1981; 138: 51-55
- Russell AT, Pasnau RO, Taintor ZC: Emotional prob'ems of residents in psychiatry. Am J Psychiatry 1975; 132:263–267
- 3. Tokarz JP: Special groups at risk for impairment—residents (digested remarks), in The Impaired Physician: Proceedings of the Third AMA Conference on the Impaired Physician. Edited by Robertson JJ. Chicago, Department of Mental lealth, American Medical Association, 1978
- Valko RJ, Clayton PJ: Depression in the internship. D 5 Nerv Syst 1975; 36:26-29
- Waring EM: Emotional illness in psychiatric trainees. Br J Psychiatry 1974; 125:10–11
- Radloff L: The CES-D Scale: a self-report depression scale for research in the general population. Applied Psychological Measurement 1977; 1:385-401
- Myers JK, Weissman MM: Use of a self-report symptom scale to detect depression in a community sample. Am J Psychiatry 1980; 137:1081–1084
- Devins GM, Orme CM: Center for Epidemiologic Studies Depression Scale, in Test Critiques, vol 2. Edited by Keyser DJ, Sweetland RC. Kansas City, MO, Test Corporation of America, 1985
- 9. Roberts RE, Vernon SW: The Center for Epidemiological

- Studies Depression Scale: use in a community sample. Am J Psychiatry 1983; 140:41-46
- 10. Barnes GE, Prosen H: Depression in Canadian general practice attenders. Can J Psychiatry 1984; 29:2-10
- 11. Clark VA, Aneshensel CS, Frerichs RR, et al: Analysis of effects of sex and age in response to items on the CES-D Scale. Psychiatr Res 1981; 5:171–181
- 12. Comstock GW, Helsing KJ: Symptoms of depression in two communities. Psychol Med 1976; 6:551-563
- 13. Lin N, Ensel WM: Depression-mobility and its social etiology: the role of life events and social support. J Health Soc Behav 1984; 25:176-188
- 14. Weissman MM, Sholomskas D, Pottenger M, et al: Assessing depressive symptoms in five psychiatric populations: a validation study. Am J Epidemiol 1977; 106:203-214
- Nie NH, Hull ČH, Jenkins JG, et al: Statistical Package for the Social Sciences, 2nd ed. New York, McGraw-Hill, 1975
- 16. Blalock HM Jr: Social Statistics, 2nd ed. New York, McGraw-Hill, 1972
- 17. Loether HJ, McTavish DG: Descriptive and Inferential Statistics. Boston, Allyn and Bacon, 1976
- 18. Andrews FM, Klem L, Davidson TN, et al: A Guide for Selecting Statistical Techniques for Analyzing Social Science

- Data. Ann Arbor, Institute for Social Research, University of Michigan, 1974
- 19. Hurwitz TA, Beiser M, Nichol H, et al: Impaired interns and
- residents. Can J Psychiatry 1987; 32:165-169
 20. Bowman MA, Allen DI: Stress and Women Physicians. New
- York, Springer-Verlag, 1985 21. Smith JW, Denny WF, Witzke DB: Emotional impairment in internal medicine house staff. JAMA 1986; 255:1155-1158
- 22. Myers MF: Marital distress among resident physicians. Can Med Assoc J 1986; 134:1117-1118
- 23. Eisenberg L: The distaff of Aesculapius—the married woman as physician. J Am Med Wom Assoc 1981; 36:84-88
- 24. McCue JD: The distress of internship. N Engl J Med 1985; 342:
- 25. Werner ER, Korsch BM: Professionalization during pediatric internship: attitudes, adaptation and interpersonal skills, in Becoming a Physician: Development of Values and Attitudes in Medicine. Edited by Shapiro EL, Lowenstein LM. Cambridge, Mass, Ballinger, 1978
- Klein H, Mumford E: The bent twig: psychiatry and medical education. Am J Psychiatry 1978; 135:320–324
- Vaillant G, Sobowale NC, McCarthur C: Some psychological vulnerabilities of physicians. N Engl J Med 1972; 287:372-375

The Psychosocial Impact of War Trauma and Torture on Southeast Asian Refugees

Richard F. Mollica, M.D., M.A.R., Grace Wyshak, Ph.D., and James Lavelle, M.S.W.

More than 700,000 refugees from Southeast Asia have settled in the United States since 1975. Although many have suffered serious trauma, including torture, few clinical reports have described their trauma-related symptoms and psychosocial problems. The authors conducted a treatment study of 52 patients in a clinic for Indochinese. They found that these patients were a highly traumatized group; each had experienced a mean of 10 traumatic events and two torture experiences. Many of the patients had concurrent diagnoses of major affective disorder and posttraumatic stress disorder as well as medical and social disabilities associated with their history of trauma. The authors also found that Cambodian women without spouses demonstrated more serious psychiatric and social impairments than all other Indochinese patient groups.

(Am J Psychiatry 1987; 144:1567–1572)

S ince 1975, more than 930,000 refugees have been resettled in the United States; more than 700,000 of these are from Southeast Asia (1). Many Indochinese refugees have experienced serious multiple traumas, including torture. There have been many reports of concentration camp experiences in Cambodia (2), reeducation programs and brainwashing (3), and violent sexual abuse of Indochinese women (4). In addition, serious emotional distress has been associated with the escape, refugee camp, and resettlement experiences (5).

Several studies measuring the psychological adaptation of Indochinese refugees to U.S. society (6, 7) suggested that many are at high risk for developing serious psychiatric disorders. However, no epidemio-

Received Sept. 23, 1986; revised June 12, 1987; accepted July 27, 1987. From Harvard Medical School, Massachusetts General Hospital; the Indochinese Psychiatry Clinic, St. Elizabeth's Hospital, Boston; and the Harvard School of Public Health, Boston. Address reprint requests to Dr. Mollica, Warren 7, Massachusetts General Hospital, Fruit St., Boston, MA 02114.

The authors thank Rosa Lek, Binh Tu, Ter Yang, and Ronald White, M.D., for their clinical and research support; Rosemarie Coelho, M.S.W., research coordinator; William H. Anderson, M.D., for institutional and academic support; and Russell Jalbert for guidance and assistance.

Copyright © 1987 American Psychiatric Association.

logic evidence exists that can confirm this claim. Furthermore, clinical descriptions of Indochirese patients have been extremely limited because of the almost complete lack of specialized mental health programs for this population. Westermeyer et al. (8), Kinzie and Manson (9), and Nguyen (10) have been able to provide preliminary descriptions of Indochinese patients treated in university clinics. There is little agreement among these studies, however, on the diagnostic categories observed, although each has indicated the importance of identifying and treating major affective disorders. Until the 1984 report of Kinzie et al. (11), no refugee study had made the diagnosis of posttraumatic stress disorder.

In 1983, the U.S. Office of Refugee Resettlement awarded five national demonstration project grants to study the mental health problems of and services required by Indochinese refugees. The research findings presented in this report are the results of the national demonstration project conducted by the Indochinese Psychiatry Clinic in Boston (12. This report contributes additional clinical information to the studies cited above by focusing on refugee trauma and associated psychiatric and social impairments. We will review the important implications of these findings for diagnosis and treatment. We will also give attention to those major patient subgroups, such as Cambodian widows, who were revealed to have greater psychosocial problems than other Indochinese patients.

METHOD

The Indochinese Psychiatry Clinic is a specialized subdivision of the Department of Psychiatry of St. Elizabeth's Hospital in Boston. The clinic was established 5 years ago by two of us (R.F.M. and J.L.) to meet the mental health needs of Indochinese refugees suffering from serious psychiatric disorders. The clinic's diagnostic and treatment procedures have been described elsewhere (13, 14).

The national demonstration project included a comprehensive clinical assessment of all clinic patients in treatment over a 6-month period (i.e., 6-month treated prevalence) as part of a treatment outcome study. Outcome results have been presented elsewhere (15).

All patients in treatment in January 1984 and all new admissions to the clinic over the following 6month period were included in the study. Of the 79 Indochinese patients who were evaluated and/or in treatment during this time period, 52 completed the 6-month outcome study. The sociodemographic and diagnostic characteristics of the total sample of 79 patients did not differ substantially from those of the 52 adult patients included in this report. To determine the sociodemographic, family, social, and personal characteristics of these patients, a standardized interview schedule, the Life Events and Social History Questionnaire, was used. This questionnaire was developed by the Indochinese Psychiatry Clinic (15) and is available on request from the first author. The Life Events and Social History Questionnaire was also used to survey the number of traumatic events experienced by the patients during the war, during their escape, and in the refugee camps. The questionnaire was administered by the clinic's Indochinese paraprofessional staff under the direct supervision of the research coordina-

DSM-III diagnoses of all patients were made by two psychiatrists with more than 2 years of experience treating Indochinese patients. In addition, the presence or absence of posttraumatic stress disorder was evaluated by using the National Institute of Mental Health (NIMH) Diagnostic Interview Schedule (DIS) (16). The patient's highest level of adaptive functioning during the previous year was evaluated by using DSM-III axis V criteria. Finally, all patients were assessed for medical disorders by a primary care physician affiliated with the clinic.

RESULTS

Eighteen (35%) of the 52 patients were Vietnamese, 21 (40%) were Cambodian, and 13 (25%) were Hmong/Laotian. This distribution is compatible with the estimated overall community census for Southeast Asians in Massachusetts (17). Most clinic patients were middle-aged adults; the Hmong/Laotian patients were the oldest. Eight (44%) of the Vietnamese patients were single men; nine (43%) of the Cambodian patients were divorced, separated, or widowed women. (Because the data revealed that Cambodian women without spouses were more highly traumatized than other patients in this study, they will be treated as a distinct subgroup in this paper.) The Vietnamese patients practiced ancestor worship or had no religion, the Cambodian patients were primarily Buddhist, and the Hmong/Laotian patients were primarily Roman Catholic and/or practiced animism.

The 52 patients experienced traumatic events primarily during three distinct periods—during the war, during the escape, and in the refugee camp. Resettlement, although psychologically traumatic, was not generally associated by these patients with substantial personal or physical injury.

TABLE 1. Number of Traumatic and Torture Experiences in Indochina^a and Lack of Support Among 52 Indochinese Psychiatric Patients

	Traum Experie		Torti Experie	Patient Believin They Had N One to Rely or		
Patient Group	Mean	SD	Mean	SD	N	%
Sex						
Female (N=27)	11.8	7.1	2.0	2.0	11	41
Male (N=25)	7.9	6.3	1.2	1.4	10	40
Diagnosis of						
posttraumatic stress						
disorder						
No $(N=26)$	6.7	6.9	1.2	1.8	10	38
Yes (N=26)	13.0	5.5	2.1	1.8	11	42
Ethnicity						
Cambodian						
(N=21)	16.1	4.2	3.1	1.2	17	81
Hmong/Laotian						
(N=13)	10.7	2.9	1.2	1.9	0	(
Vietnamese						
(N=18)	2.1	2.5	0.3	0.5	4	22
Marital status						
Single (N=15)	5.3	6.6	0.8	1.3	6	40
Married (N=21)	11.4	5.8	1.8	1.8	7	33
Widowed,						
separated, or						
divorced (N=16)	12.4	6.0	2.2	1.8	8	50
Cambodian women						
who were widowed,						
separated, or						
divorced (N=9)	17.1	4.4	3.5	1.5	7	78
Total (N=52)	9.9	7.0	1.6	1.8	21	40

^aThese events occurred during the war, during the escape, or in a refugee camp.

bLack of food or water, ill health, lack of shelter, imprisonment, wai injury, torture, sexual abuse, social isolation or solitary confinement, being near death or witnessing death, being lost or kidnapped, witnessing murder or torture, or other (e.g., forced separation from children).

^cTorture defined by patient, imprisonment, or solitary confinement

The refugees' trauma experiences fell into four general categories: 1) deprivation, 2) physical injury or torture, 3) incarceration or reeducation camps, and 4) witnessing killing or torture. Specific trauma events surveyed included 1) lack of food or water, 2) ill health; 3) lack of shelter, 4) imprisonment, 5) war injury, 6) torture, 7) sexual abuse, 8) social isolation or solitary confinement, 9) being near death or witnessing death, 10) being lost or kidnapped, 11) witnessing murder or torture, and 12) other (e.g., forced separation from children).

Specific torture events included torture (self-defined by the patient), imprisonment, and solitary confinement. These three items conform to the 1975 United Nations definition of torture (18).

Table 1 shows the mean number of traumatic events experienced by the 52 patients in Indochina. This table reveals that Cambodian patients experienced more trauma and/or torture than other Indochinese groups. All of the patients, however, had experienced serious

multiple traumas. Not surprisingly, patients with the diagnosis of posttraumatic stress disorder had experienced twice as many traumatic events as had patients with other psychiatric diagnoses. Cambodian women who did not have spouses (i.e., who were separated, divorced, or widowed) had experienced more traumatic experiences than all other clinical subgroups.

The 52 patients had been in the United States for a mean±SD of 40.5±18.2 months. There was a high correlation between being Cambodian and being a more recent arrival; this made it impossible to determine if length of stay had any association with psychiatric diagnosis or impairment in social role.

The perceived community relationships of clinic patients revealed two major findings. Table 1 reveals that a great majority of the Cambodian patients stated they had no one (including family members) on whom they could rely. This finding is dramatically different from the response given to this question by all other clinic patients. Cambodian patients also revealed major differences in their perception of the hostility shown to them by other community groups. Seventeen (81%) of the 21 Cambodian patients perceived marked hostility and prejudice from Chinese and other Asian groups, compared with only one (3%) of the 31 other patients. Although the Cambodians (especially Cambodian women) felt that they had experienced significantly less hostility from Americans than from Asians, seven (33%) still felt prejudice and hostility from Americans, compared with only one (3%) of the Hmong/Laotian and Vietnamese patients.

The clinic's Indochinese patients all indicated major difficulties with the triad of social needs identified by the U.S. Office of Refugee Resettlement—language, employment, and housing. Forty-eight (92%) of the 52 patients indicated major problems with language, 32 (62%) indicated major problems with employment, and 28 (54%) indicated major problems with housing. Patients diagnosed as having posttraumatic stress disorder revealed twice the amount of discomfort in their housing situation as other patients. Fewer Cambodian women without spouses than other groups were enrolled in classes in English as a second language. Although most clinic refugee patients were actively attending such classes, only five of these nine Cambodian women were attending such classes.

Five (28%) of 18 Vietnamese, eight (38%) of 21 Cambodians, and five (38%) of 13 Hmong/Laotians were in need of ongoing medical treatment for medical disorders that were often the physical sequelae of their traumatic experiences (e.g., tuberculosis, Hansen's disease [leprosy], and hearing or visual impairments caused by torture).

Table 2 gives the major DSM-III diagnoses of the 52 Indochinese patients. Major affective disorder was the most prominent diagnosis for each ethnic group. Other common diagnoses included posttraumatic stress disorder, schizophrenia, and organic brain syndrome.

Except for one Laotian patient, the diagnosis of posttraumatic stress disorder was always associated

TABLE 2. Psychiatric Diagnoses of Cambodian, Hmong/Laotian, and Vietnamese Psychiatric Patients

	boo Pati	m- lian ents =21)	Lac Pati	ong/ otian ents =13)	nar Pat	iet- nese ients =18)	All Patients (N=52) ^a	
Diagnosis	N	%	N	%	N	%	N	%
Major affective disorder Posttraumatic stress	17	81	11	85	9	50	37	71
disorder	12	57	12	92	2	11	26	50
Schizophrenia Organic brain	3	14	1	8	1	6	5	10
syndrome Drug and/or alcohol	2	10	0	0	1	11	4	8
addiction	0	0	0	0	1	6	1	2
Psychoneurosis	1	5	1	8	5	28	7	13

^aMore than one diagnosis was made for each patient.

with an additional psychiatric diagnosis, usually major affective disorder. Almost all of the patients diagnosed as having posttraumatic stress disorder revealed a history of bad dreams and nightmares during the three major trauma periods—during the war, during the escape, or in a refugee camp. However, 10 (62%) of the 16 patients with major affective disorder but not posttraumatic stress disorder and five (50%) of the 10 patients with all other diagnoses but not posttraumatic stress disorder were affected by bad dreams and nightmares. In addition, 37 (90%) of the 41 patients with bad dreams and nightmares also experienced serious sleep disturbances.

Forty-four (85%) of the 52 patients functioned at a DSM-III level of fair (level 4) or poorer during the previous year. Only eight patients with major affective disorder functioned at levels of good (level 3) to very good (level 2). Depressed patients who also had the diagnosis of posttraumatic stress disorder did not reveal significantly greater impairments in social functioning than did patients with only the diagnosis of major affective disorder.

DISCUSSION

This study reveals three new important clinical findings on the psychiatric care of the Indochinese refugee patient not previously reported:

- 1. The majority of Indochinese refugee patients referred for psychiatric intervention had experienced multiple traumatic events.
- 2. Cambodian women without spouses demonstrated more serious psychiatric and social impairments than other Indochinese patients.
- 3. A high percentage of Indochinese psychiatric patients suffered from major affective disorder and posttraumatic stress disorder.

Although the study findings are based on a small 6-month treated prevalence sample (N=52) in one

geographical region, these results might be generalizable and useful to health and mental health practitioners treating Southeast Asian refugees in other clinical settings.

The traumatic experiences of Indochinese refugees have been primarily highlighted in the news reports of journalists and the mass media. Little systematic attention has been given to documenting the nature and degree of trauma suffered by refugees and the relationship of these traumatic experiences to the development of serious psychiatric and social impairments. Psychosocial adaptation studies and clinical investigations of psychiatric disorders found among refugees had not reviewed refugee traumatic and related disorders, such as posttraumatic stress disorder, until the report of Kinzie et al. (11) on Cambodian concentration camp survivors. Review of five major investigations on the psychological sequelae of torture by Canadian (19–21) and Danish (22, 23) research groups reveals limited descriptions of trauma-related symptoms and diagnoses. These studies examined more than 300 torture survivors from Greece and Latin America (19-23). Although the majority were found to have serious psychological symptoms such as depression and anxiety, no symptoms of posttraumatic stress disorder were systematically assessed, and the possibility of the diagnosis of posttraumatic stress disorder was not evaluated (unpublished manuscript of A. Goldfeld et al.). In contrast, our study demonstrates that refugee patients are survivors of multiple traumas, including torture, and that many of them suffer from both depression and posttraumatic stress disorder.

The clinical implications of a number of this study's results are important in spite of the lack of known specificity between type of trauma and psychological impairment (24) and the inability to generalize from the findings of a treatment study to the community (25). In fact, these findings point to the importance of conducting epidemiologic studies in refugee communities to determine the extent of traumatic experiences and the prevalence of psychiatric disorders in nonpatient populations.

First, our data dramatically reveal the extent of trauma experienced by Indochinese psychiatric patients. Fifty percent of our patients had posttraumatic stress disorder and, of the 26 patients without posttraumatic stress disorder, 15 (58%) had traumarelated symptoms such as nightmares. Cambodian patients, in particular, were the most traumatized refugee group. In addition, more than one-third of all patients had medical disorders that were often associated with their trauma history. Other reports (26, 27) have demonstrated a high prevalence of medical disorders in refugee communities; the Cambodian population has been shown to have a significantly lower health status than all other groups (26, 27).

Second, this study revealed through its use of a standardized interview schedule (i.e., the Life Events and Social History Questionnaire) that our patients provided considerably more trauma-related informa-

tion to the staff during the research interview than they had previously provided during their clinical evaluation and treatment. This finding demonstrates the importance of the clinician's conducting a systematic assessment of the refugee's trauma stories and experiences. Otherwise, patients will not give this information readily.

Third, obtaining a detailed trauma history from the refugee patient is extremely difficult. It must be delicately collected from the refugee patient because it can easily stimulate serious emotional distress. In this study, refugee patients were willing to share their trauma histories only after they had developed a trusting relationship with the Indochinese paraprofessionals and the research team. It is highly unlikely, therefore, that a trauma history can be reliably obtained from a research interview unless trust has been established. The clinic's research team also had major difficulties in eliciting and recording the patients' trauma histories (28). This was true of both the professional and Indochinese paraprofessional staff. Refugee clinicians who had suffered many of the traumatic events described by their patients were especially reluctant to stimulate emotional reactions within themselves by reviewing a patient's trauma story.

Female Refugees and Cambodian Widows

This study revealed the major social and psychological impairments of the clinic's female patients and the Cambodian widows. Many of the clinic's female patients had been raped or sexually abused, had lost their spouses to violent death, or had lost children through starvation, murder, or kidnapping.

In a U.S. State Department report (29), an NIMH Asian specialist reported the following story given to her in Thailand by a Vietnamese boat survivor:

Ms. A left Vietnam in a boat with 32 people, nine of whom were female. A few days after they set out to sea they were met by five pirate boats. All nine females were abducted. They were separated into three boats. Ms. A was raped for five consecutive nights. Each night she was raped by seven pirates. She attempted to commit suicide by jumping into the sea, but she was grabbed by her hair and rescued. On the sixth day, the pirates abandoned her on a beach by a refugee camp.

Although similar stories have been heard by clinic staff, a history of sexual violence is rarely directly provided to the staff by refugee women. The history of rape trauma is usually revealed through veiled accounts of personal trauma, through the comments of family members or friends, and the likelihood of such an event occurring (if the women had been attacked by Thai pirates). Little is known about the cultural and emotional factors that inhibit refugee women from seeking help for rape trauma or the coping styles they use to deal with this problem. The development of culturally sensitive treatment approaches for these victims of sexual violence is in its infancy.

The clinic's Cambodian widows had experienced at least two of the three traumas of rape, loss of spouse, or loss of children. These women had higher levels of depressive symptoms than all other clinic patients. They perceived themselves as socially isolated and living in a hostile social world. These refugee women formed a special high-risk group. In general, they were extremely depressed, culturally isolated (married Cambodian women would keep them away from their husbands), and overwhelmed by their attempts to work outside of the home (almost all had been housewives) as well as care for their surviving children. In addition, they lacked the economic and emotional support of a spouse and were unable to imagine the possibility of remarrying either a Cambodian or an American man. The marriages of most of these women had been arranged; they had no concept of dating. Their inability to learn English because of poor attendance at classes in English as a second language and their depression further deepened their feelings of social inadequacy and hopelessness.

Posttraumatic Stress Disorder

Twenty-six of the 52 patients were diagnosed as having posttraumatic stress disorder. Except for serious discomfort with their housing, patients with posttraumatic stress disorder did not reveal greater impairments in social functioning than did other clinic patients.

Notably, posttraumatic stress disorder was the only diagnosis of only one patient. For the other 25 patients with this diagnosis, it was associated with other DSM-III diagnoses, primarily major affective disorder. This finding is consistent with the results of Kinzie et al. (11). Furthermore, although Van der Kolk et al. (30) and Kramer et al. (31) have suggested that nightmares might be the hallmark of posttraumatic stress disorder, more than half of our patients without this diagnosis also suffered from bad dreams, nightmares, and related sleep disturbances. These results suggest that although nightmares and sleep disturbances are highly correlated with posttraumatic stress disorder they may also be associated with serious war trauma and torture, whether or not the full syndrome is present and diagnosable. These findings support the clinical approach of the Indochinese Psychiatry Clinic—that the most effective pharmacological intervention for traumatized refugee patients with posttraumatic stress disorder and/or major affective disorder is antidepressant pharmacotherapy (32). Furthermore, it is our clinical impression that both nightmares and the associated sleep disturbances of refugee patients are extremely difficult to treat in spite of the clinical improvement of depressive symptoms. The appropriate therapeutic response to trauma-related nightmares and sleep disturbances is unknown and in need of further investigation, especially since most refugee patients state that these symptoms seriously impair their social functioning.

Finally, similar to the trauma history, the symptoms of posttraumatic stress disorder were usually revealed only during the administration of the standardized interview schedule. This research finding supports our clinical impression that highly traumatized and tortured patients may have difficulty articulating their trauma-related symptoms. We suggest that this reluctance is not only secondary to culturally determined patterns of health-seeking behavior. Instead, craumatized patients may have difficulty in "putting words around symptoms" because the expression of these trauma-related symptoms can significantly increase their emotional distress. To deal with this problem, the Indochinese Psychiatry Clinic has developed and validated three language versions of the Hopking Symptom Checklist-25 for obtaining the symptoms of anxiety and depression (33).

CONCLUSIONS

This study reveals the serious multiple traumas experienced by Indochinese psychiatric patients. Recognition of the Indochinese refugee's traumatic experience, including its impact on his or her psychological and social realities, can provide proper guidelines for effective diagnosis and treatment. Acknowledging the psychiatric problems of special patient subgroups (e.g., Cambodian widows) can lead to culturally sensitive therapeutic interventions.

- Refugee Resettlement Program: Report to Congress. Washington, DC, US Department of Health and Human Services, Social Security Administration, Office of Refugee Resettlement, Jan 31, 1984
- 2. White PT: Kampuchea wakens from a nightmare. National Geographic 1982; 161:590-623
- 3. Nhu T: Reeducation kills. Freedom at Issue 1985; 85:19-21
- US Committee for Refugees: Vietnamese Boat People: Pirates' Vulnerable Prey. Washington, DC, American Council for Nationalities Service, 1984
- Boman B, Edwards M: The Indochinese refugee: an overview. Aust NZ J Psychiatry 1984; 18:40-52
- Hull D: Migration, adaptation, and illness: a review. Soc Sci Med 1979; 10:25–36
- Lin KM, Tazuma L, Masuda M: Adaptational problems of Vietnamese refugees, part I: health and mental status. Arch Gen Psychiatry 1979; 36:955-961
- Westermeyer J, Vang TF, Neider J: A comparison of refugees using and not using a psychiatric service: an analysis of DSM-III criteria and self-rating scales in cross-cultural context. J Operational Psychiatry 1983; 14:36–41
- Kinzie JD, Manson S: Five years' experience with Indochinese refugee psychiatric patients. J Operational Psychiatry 1983; 14: 105-111
- 10. Nguyen SD: Mental health services for refugees and immigrants. Psychiatr J Univ Ottawa 1984; 9:85-91
- 11. Kinzie JD, Fredrickson RH, Ben R, et al: Posttraumat c stress disorder among survivors of Cambodian concentration camps. Am J Psychiatry 1984; 141:649–650
- 12. Science and the citizen. Scientific American, July 1985, pp 58-59
- 13. Mollica RF: The trauma story: the psychiatric care of refugee

- survivors of violence and torture, in Post-Traumatic Therapy and the Victim of Violence. Edited by Ochberg FM. New York, Brunner/Mazel (in press)
- 14. Mollica RF, Lavelle J: The trauma of mass violence and torture: an overview of the psychiatric care of the Southeast Asian refugee, in Clinical Practice in Cross-Cultural Mental Health. Edited by Comas-Diaz L, Griffith EEH. New York, John Wiley & Sons (in press)
- Mollica RF, Wyshak G, Coelho R, et al: The Southeast Asian Psychiatry Patient: A Treatment Outcome Study. Washington, DC, US Office of Refugee Resettlement, 1985
- Robins LN, Helzer JE, Craughan J, et al: NIMH Diagnostic Interview Schedule (DIS), Wave II. St Louis, Washington University School of Medicine, 1982
- 17. Refugee Statistics. Boston, Commonwealth of Massachusetts Office of Refugee Resettlement, 1985
- 18. Declaration Against Torture: Article I. New York, United Nations, Dec 19, 1985
- 19. Allodi F, Lowgill G: Ethical and psychiatric aspects of torture: a Canadian study. Can J Psychiatry 1982; 98–102
- Domovitch E, Berger PB, Wawer MJ, et al: Human torture: description and sequelae of 104 cases. Canadian Family Physician 1984; 30:827–830
- Allodi F, Randall G, Lutz EL, et al: Physical and psychiatric effects of torture: two medical studies, in The Breaking of Bodies and Minds. Edited by Stover E, Nightingale EO. New York, WH Freeman, 1985
- 22. Abildgaard U, Dougaard G, Marcussen H, et al: Chronic organic psycho-syndrome in Greek torture survivors. Dan Med Bull 1984; 31:239-242
- Rasmussen OV, Lunde I: Evaluation of investigations of 200 torture victims. Dan Med Bull 1980; 27:241-243
- 24. Laufer RS, Brett E, Gallops MS: Posttraumatic stress disorder

- (PTSD) reconsidered: PTSD among Vietnam veterans, in Post-Traumatic Stress Disorder: Psychological and Biological Sequelae. Edited by Van der Kolk BA. Washington, DC, American Psychiatric Press, 1984
- Horowitz MJ: Stress-response syndromes: a review of posttraumatic and adjustment disorders. Hosp Community Psychiatry 1986; 37:241–249
- Catanzaro A, Moser J: Health status of refugees from Vietnam, Laos and Cambodia. JAMA 1982; 247:1303–1308
- Hoang NH, Erickson RV: Guidelines for providing care to Southeast Asian refugees. JAMA 1982; 248:710–714
- Haley S: When the patient reports atrocities: specific treatment considerations of the Vietnam veteran. Arch Gen Psychiatry 1974; 30:191–196
- 29. Cheung FK: Assessment and Recommendations for Indochinese Refugees in Southeast Asia: Special Focus on Boat People Suffering Violence in Thailand, Philippines, Indonesia, Singapore. Washington, DC, Bureau for Refugee Programs, US Department of State, Sept 14, 1984
- 30. Van der Kolk B, Blitz R, Burr W, et al: Nightmares and trauma: a comparison of nightmares after combat with lifelong nightmares in veterans. Am J Psychiatry 1984; 141:187–190
- 31. Kramer M, Schoen LS, Kinney L: Long term effects of traumatic stress, in Post-Traumatic Stress Disorder: Psychological and Biological Sequelae. Edited by Van der Kolk BA. Washington, DC, American Psychiatric Press, 1984
- 32. Boehnlein JK, Kinzie JD, Ben R, et al: One-year follow-up study of posttraumatic stress disorder among survivors of Cambodian concentration camps. Am J Psychiatry 1985; 142:956–959
- 33. Mollica RF, Wyshak G, de Marneffe D, et al: Indochinese versions of the Hopkins Symptom Checklist-25: a screening instrument for the psychiatric care of refugees. Am J Psychiatry 1987; 144:497–500

Obsessive-Compulsive Symptoms in Panic Disorder

Thomas A. Mellman, M.D., and Thomas W. Uhde, M.D.

Previous reports have noted an increased prevalence of obsessive-compulsive symptoms in patients with panic disorder. The authors found a prevalence of obsessive-compulsive symptoms in 19 (27%) of 70 patients with panic disorder. Compared to a subgroup of 25 patients with classic features of panic disorder and no obsessive-compulsive symptoms, the subgroup with obsessive-compulsive symptoms had an earlier onset of illness, were more likely to have personal and family histories of major depression and substance abuse, and showed a poorer outcome after treatment.

(Am J Psychiatry 1987; 144:1573-1576)

There has been much interest in the clinical and biological overlap of both panic and obsessive-compulsive disorders with major affective disorders (1–3). Although less is known about the relationship between panic disorder and obsessive-compulsive disorder, some evidence suggests a partial overlap in clinical phenomena. Using the Research Diagnostic Criteria (RDC) for obsessive-compulsive disorder, Breier et al. (4) found a 17% prevalence in a sample of patients with agoraphobia or panic disorder, and Cloninger et al. (5) reported mild obsessive-compulsive symptoms in 22% of their panic disorder sample. Both of these figures substantially exceed prevalence estimates of obsessive-compulsive disorder in the general

population (6). In both groups of patients, the obsessive-compulsive symptoms had begun after the first panic attack in the majority of cases. Marks (7) has also suggested that "any obsession" can be found in agoraphobia and that the symptoms can fluctuate independent of phobias. He also suggested that "marked obsessions" may affect prognosis adversely. Medications known to be effective in treating panic disorder have been reported to have some efficacy in treating obsessive-compulsive conditions, and these reports have highlighted the co-occurrence of panic attacks or other anxiety symptoms in the obsessive-compulsive disorder patients who respond (8. 9).

In general, however, patients with obsessive-compulsive disorder tend to be more refractory to pharmacotherapies than patients with panic disorder. Despite many reports of the clinical efficacy of drug treatment in panic disorder, clinical experience suggests that there are subgroups of panic patients who respond less optimally. Clinical variables that characterize such subgroups would be of both clinical and research interest.

For these reasons, we first determined the prevalence of obsessive-compulsive symptoms in a group of patients with panic disorder. We then compared clinical variables and treatment outcome of the panic disorder patients who had obsessive-compulsive symptoms with those of a subgroup of the panic disorder patients who did not have obsessive-compulsive features.

METHOD

Subjects

The patients in the study were those consecutively evaluated in the NIMH anxiety disorders program over the last 5 years who received a diagnostic interview with the Schedule for Affective Disorders and Schizophrenia (SADS) (10) and met the RDC for panic disorder. Nineteen (27%) of these 70 panic disorder patients also reported symptoms that fit the RDC

Received Oct. 30, 1986; revised April 16, 1987; accepted May 27, 1987. From the Unit on Anxiety and Affective Disorders, Biological Psychiatry Branch, NIMH. Address reprint requests to Dr. Uhde, Unit on Anxiety and Affective Disorders, Bldg. 10, Rm. 3S239, NIMH, 9000 Rockville Pike, Bethesda, MD 20892.

The authors thank Elizabeth Hoge, Marilla Geraci, Barbara Scupi, Sue Rose, Joan Harris, and Patricia Hafer for their assistance and Ds. Robert Post for his ongoing scientific collaboration and, along with Dr. Thomas Insel, for review of this manuscript.

Supported in part by National Research Service Award MH-09410 from NIMH.

definition of obsessive-compulsive disorder. Of this group, 10 (53%) reported obsessional symptoms only, two (11%) reported compulsive symptoms only, and the remaining seven (37%) reported obsessional plus compulsive symptoms. These 19 patients with panic disorder plus obsessive-compulsive symptoms comprised the study group.

A comparison group without obsessive-compulsive symptoms was selected from the original 70 to form a homogeneous sample with certain classic features of panic disorder. The specific inclusion criteria for the comparison group were 1) clear recollection of the first panic attack, 2) unpredictable (i.e., "spontaneous") onset of at least a proportion of past panic attacks, 3) adequate historical data, and 4) lifetime absence of obsessive-compulsive disorder symptoms. Twenty-five patients met these criteria. These restrictive criteria were established to ensure that only patients with commonly accepted classic features of panic disorder were included in the comparison group. The selection was not made with regard to severity.

At the time of the initial evaluation, there was a significant difference in the mean \pm SD ages of the panic disorder patients with obsessive-compulsive symptoms (31.5 \pm 7.1 years) and those without obsessive-compulsive symptoms (37.8 \pm 8.6 years) (t=2.47, df=42, p<.01). The percentages of women among the patients with (68%) and without (76%) obsessive-compulsive symptoms did not significantly differ.

Data Collection

The SADS interview was administered to all patients. Diagnosis of major depressive episodes, the degree of avoidance experienced, and other lifetime course of illness variables were assessed longitudinally on life charts, as detailed elsewhere (11), by a research assistant who was blind to patient classification and the purpose of the study. Other demographic data were collected by means of chart review. Lifetime diagnosis of major axis I disorders in first-degree relatives was based on *DSM-III* criteria and documentation of treatment with medication and/or hospitalization; family members were not interviewed.

Follow-up data were obtained from structured telephone interviews of patients who had completed the NIMH treatment program; the mean±SD time between treatment completion and telephone contact was 16.3 ± 13.4 months (range, 3–46) for the group with obsessive-compulsive symptoms and 13.4±10.0 months (range, 7-32) for the group without obsessivecompulsive symptoms. We were able to contact 16 (84%) of the 19 patients with obsessive-compulsive symptoms and 14 (56%) of the 25 patients without obsessive-compulsive symptoms (nonsignificant difference). In the original group of panic disorder patients without obsessive-compulsive symptoms, those contacted at follow-up did not differ at baseline from the uncontacted patients in terms of age at onset of illness $(25.4\pm5.6 \text{ versus } 29.8\pm9.3 \text{ years; } t=1.44, df=22,$

n.s.), panic attacks per month $(11.1\pm11.4 \text{ versus } 12.8\pm13.4; t=0.31, df=22, n.s.)$, years of illness $(7.3\pm5.8 \text{ versus } 8.0\pm6.9; t=0.24, df=22, n.s.)$, longest interval without illness $(18.7\pm29.1 \text{ versus } 32.2\pm38.1 \text{ months}; t=0.96, df=22, n.s.)$, history of major depression $(29\% \text{ versus } 20\%; \chi^2=0.23, df=1, n.s.)$, or history of marked or severe agoraphobia $(57\% \text{ versus } 50\%; \chi^2=0.11, df=1, n.s.)$. The patients' current medication regimens were inventoried. The percentage of patients taking adequate standard or experimental medications at follow-up did not differ between the groups with (94%) and without (79%) obsessive-compulsive symptoms.

The interview included information on the 3-month prevalence (the 90 days just before the telephone interview) and self-rated change for the following items: panic, generalized anxiety, avoidance, obsessions, and compulsions. The patient made a global judgment as to whether each of these five symptoms had improved, was unchanged, or had worsened since admission to the program. The interview also included a social disability scale (12, 13) used in previous studies of treatment of agoraphobia and panic disorder: 1=no symptoms, 2=symptoms do not interfere with normal social or occupational functioning, 3= mild interference, 4=marked interference, 5=radical interference, i.e., symptoms prevent or radically alter normal functioning.

Data analysis was performed by means of chi-square analysis with Yates' correction for categorical data and grouped t tests for continuous data. The data are presented as means and standard deviations.

RESULTS

As shown in table 1, more of the patients with than without obsessive-compulsive symptoms had lifetime histories of DSM-III major depression and alcohol or drug abuse. They also were significantly younger at the onset of illness (defined as the first panic attack) (20.3 ± 4.7 versus 27.1 ± 7.7 years; t=3.43, df=42, p<.01). The two groups did not differ significantly with regard to the presence or severity of agoraphobia, and there was no difference in frequency of panic attacks at the time of initial evaluation (13.0 ± 11.6 versus 11.2 ± 11.9 per month), total duration of illness (7.8 ± 4.1 versus 7.2 ± 6.0 years), and length of longest remission before the NIMH evaluation (36.4 ± 56.0 versus 24.0 ± 33.0 months).

Compared with the first-degree relatives of the patients without obsessive-compulsive symptoms, the first-degree relatives of the panic patients with obsessive-compulsive symptoms had a significantly higher prevalence of primary affective disorders and alcoholism or substance abuse (see table 1). There was no difference in the prevalence of panic or phobic disorders. Disorders of impulse control (N=2) and suicides (N=2) were noted in the first-degree relatives of the patients with obsessive-compulsive symptoms but in

TABLE 1. Characteristics of Panic Disorder Patients With and Without Obsessive-Compulsive Symptoms

	Obsessive-	order With Compulsive s (N=19) ^a	Obsessive-	der Without Compulsive s (N=25) ^b	Signif	icance	
Characteristic	N			%	(df=1)	_p	
Clinical variables							
Lifetime history of DSM;-III major depressive episode	17	89	7	28	14.10	<.001	
Lifetime history of alcohol or substance abuse	7	37	2	8	3.89	<.05	
Severe or marked agoraphobia	14	74	13	52	1.32	n.s.	
Family history							
Affective illness	12	63	5	20	6.76	<.01	
Alcohol or substance abuse	9	47	2	8	6.95	<.01	
Panic or phobic disorder	4	21	9	36	0.55	n.s.	
Outcome variables at follow-up							
One or more panic attacks per month	9	56	1	7	6.04	<.01	
Decreased generalized anxiety	6	38	12	86	5.36	<.02	
Decreased frequency of panic attacks	13	81	12	86	2.70	n.s.	
Decreased avoidance	13	81	12	86	2.68	n.s.	
Moderate to marked agoraphobia	5	31	1	7	1.41	n.s.	

^aOutcome data available for only 16 patients.

none of the families of patients without obsessive-compulsive symptoms. The single case of primary obsessive-compulsive disorder was noted in a first-degree relative of a panic disorder patient without obsessive-compulsive symptoms.

Although there was no difference in the number of patients reporting improvement in their panic attacks, a greater percentage of patients with obsessive-compulsive symptoms than patients without obsessive-compulsive symptoms continued to experience at least one panic attack per month. Thus, while both groups reported improvement in panic attacks, persistent attacks were more common at follow-up in the patients with obsessive-compulsive symptoms, even though 89% and 77% of the patients with and without obsessive-compulsive symptoms, respectively, had more than one panic attack per month at the time of initial evaluation.

Fewer panic disorder patients with than without obsessive-compulsive symptoms reported improvement in generalized anxiety, and a greater number reported the persistence of moderate to severe generalized anxiety (81% versus 29%; χ^2 =6.30, df=1, p<.01). There were no differences regarding persistence of, or improvement in, avoidance (see table 1).

Of the 16 patients with obsessive-compulsive symptoms who could be reached for follow-up, eight reported that their obsessive-compulsive symptoms had improved, seven said they remained the same, and one reported worsening. Seven reported moderate to severe obsessive-compulsive symptoms during the 3 months before the telephone follow-up contact. None of the patients without initial obsessive-compulsive symptoms reported having them at follow-up.

Psychiatric symptoms subjectively interfered with social or occupational, functioning to a significantly greater degree in the panic disorder group with obsessive-compulsive symptoms, as indicated by their scores

on the social disability scale (3.8 \pm 1.1 versus 1.4 \pm 1.0; t=6.1, df=28, p<.001).

DISCUSSION

Obsessive-compulsive symptoms were reported in 27% of our panic disorder patients, and 9% met the RDC for definite obsessive-compulsive disorder. These figures are comparable to those documented by Breier et al. (4) and Cloninger et al. (5). Although only a portion of our panic disorder patients with obsessivecompulsive symptoms met the criteria for definite obsessive-compulsive disorder (i.e., their symptoms caused them to seek treatment or impaired their social or occupational functioning), the failure of the remaining patients to meet formal criteria may be partially attributed to the difficulty in deciding which symptom cluster (panic-phobic versus obsessive-compulsive) actually produced the greatest dysfunction or led the patient to seek treatment. Specific information regarding the nature of obsessive-compulsive symptoms from 13 of the patients suggested overlap with symptoms typical of obsessive-compulsive disorder. Aggressive obsessional themes were present in four patients, sexual themes in three, contamination fears and associated behaviors in two, ideation regarding self-deprecation in one, fears of personal disaster in one, excessive checking behaviors in two, and nonpurposeful rituals in one patient. The obsessions were distinct from the worries and ruminations typically seen in agoraphobia and panic disorder (e.g., fear of having a panic attack, embarrassment, or loss of control) and were experienced as intrusive and irrational or distasteful. The ritualistic behaviors were not limited to encountering phobic situations.

Our data suggest that the presence of obsessivecompulsive symptoms in panic disorder may be a

bOutcome data available for only 14 patients.

clinical predictor of a more severe and treatment refractory disorder. The greater impairment in this subgroup cannot be solely attributed to the additional problems associated with a second separate neuropsychiatric disorder (i.e., obsessive-compulsive disorder), since the patients with obsessive-compulsive symptoms in our study also had a higher prevalence of panic attacks and more severe generalized anxiety at follow-up. It is noteworthy that despite persistence of symptoms and disability, many of the panic disorder patients with obsessive-compulsive symptoms reported that their symptoms had improved. Our observation that the obsessive-compulsive symptoms improved in half of these patients is consistent with the finding of Sheehan et al. (12) that these features improved during drug trials with imipramine and phenelzine in panic disorder patients.

Several methodological weaknesses limit the conclusions that can be drawn from these data. The family histories were obtained by index patient interview and not by family interviews. A recent study, however, does support the validity of obtaining family histories from patient interviews (14), and this clinical method was consistently used across both groups.

Type and duration of treatment in the study groups was not uniform, although at follow-up pharmacotherapy appeared to actually be somewhat more aggressive in the patients with obsessive-compulsive symptoms, who were more symptomatic. Of these 16 patients, six were taking standard doses of monoamine oxidase inhibitors (phenelzine, N=3; tranylcypromine, N=2; isocarboxazid, N=1), eight were taking tricyclic antidepressants or anticonvulsants (imipramine, N=3; desipramine, N=1; amitriptyline, N=2; carbamazepine, N=2), one was taking verapamil, two were taking alprazolam, and one was taking diazepam; two were taking two of these drugs. Of the 14 patients without obsessive-compulsive symptoms, six were taking alprazolam, three were taking imipramine, one was taking phenelzine, one was taking verapamil, and three were medication free. Given the similar profiles of pharmacologic treatments, it appears unlikely that the greater frequency of panic attacks in the obsessivecompulsive group is due to inadequate treatment with antipanic medications.

The presence of obsessive-compulsive symptoms in 27% of the panic disorder patients in our study and in 17%-22% of the panic patients in two previous studies (4, 5) suggests the possibility of shared biological and psychological mechanisms in these disorders. Further support of phenomenological overlap is also provided by the similarity between the symptoms of our patients with panic disorder and obsessive-compulsive symptoms and those of Rasmussen and Tsuang's sample of patients with primary obsessivecompulsive disorder (15). They also had a 13.8% prevalence of lifetime history of panic disorder and an 8.9% prevalence of lifetime history of agoraphobia. While the psychobiological relationship between panic disorder and obsessive-compulsive disorder remains unclear, our data suggest that the presence of obsessive-compulsive symptoms in panic disorder patients might predict a more severe course and less favorable response to pharmacotherapies.

- 1. Goodwin DW, Guze SB, Robins E: Follow-up studies in obses-
- sional neurosis. Arch Gen Psychiatry 1969; 20:182-187 2. Insel T, Gillin JC, Moore A, et al: The sleep of patients with obsessive-compulsive disorder. Arch Gen Psychiatry 1982; 39: 1372-1377
- 3. Uhde TW, Roy-Byrne PP, Post RM: Panic disorder and major depressive disorder: biological relationship, in Biological Psychiatry 1985: Proceedings of the IVth World Congress of Biological Psychiatry. Edited by Shagass C, Josiassen RC, Bridger WH, et al. New York, Elsevier, 1986
- 4. Breier A, Charney DS, Heninger GR: Agoraphobia and panic disorder: development, diagnostic stability and course of illness. Arch Gen Psychiatry 1986; 43:1029–1036

 5. Cloninger CR, Martin RL, Clayton P, et al: A blind follow-up
- and family study of anxiety neurosis: preliminary analysis of the St Louis 500, in Anxiety: New Research and Changing Concepts. Edited by Klein DF, Rabkin J. New York, Raven Press,
- 6. Robins LN, Helzer JE, Weissman MM, et al: Lifetime prevalence of specific psychiatric disorders in three sites. Arch Gen Psychiatry 1984; 41:949-958
- 7. Marks IM: Agoraphobic syndrome (phobic anxiety state). Arch Gen Psychiatry 1970; 23:538-553
- 8. Tesar GE, Jenike MA: Alprazolam as treatment for a case of obsessive-compulsive disorder. Am J Psychiatry 1984; 141:
- 9. Jenike MA, Surman SO, Cassem NH, et al: Monoamine oxidase inhibitors in obsessive-compulsive disorder. J Clin Psychiatry 1983; 44:131-132
- 10. Spitzer RL, Endicott J: Schedule for Affective Disorders and Schizophrenia (SADS), 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1977
- 11. Uhde TW, Boulenger J-P, Roy-Byrne PP, et al: Longitudinal course of panic disorder: clinical and biological considerations. Prog Neuropsychopharmacol Biol Psychiatry 1985; 9:39-51
- 12. Sheehan DV, Ballenger J, Jacobsen G: Treatment of endogenous anxiety with phobic, hysterical and hypochondriacal symptoms.
- Arch Gen Psychiatry 1980; 37:51-59

 13. Kelly D, Guirguis W, Frommer E, et al: Treatment of phobic states with antidepressants. Br J Psychiatry 1970; 116:387-398 14. Andreasen NC, Rice J, Endicott J, et al: The family history
- approach to diagnosis. Arch Gen Psychiatry 1986; 43:421-429
- 15. Rasmussen SA, Tsuang MT: Clinical characteristics and family history in DSM-III obsessive-compulsive disorder. Am J Psychiatry 1986; 143:317-322

Dysphoria Associated With Methylphenidate Infusion in Borderline Personality Disorder

Peter B. Lucas, M.D., David L. Gardner, M.D., Owen M. Wolkowitz, M.D., and Rex W. Cowdry, M.D.

Two patients with borderline personality disorder experienced dramatic dysphoric episodes after acute administration of intravenous methylphenidate in a double-blind manner. These dysphoric episodes were similar to those which occurred spontaneously under conditions of psychological stress. Case histories and the behavioral and cardiovascular effects of the infusions are described. The pharmacology of methylphenidate is discussed in order to elucidate possible mechanisms mediating the observed responses to this drug.

(Am J Psychiatry 1987; 144:1577–1579)

B orderline personality disorder is characterized by dramatic episodes of dysphoria and behavioral dyscontrol in response to stress. Baseline studies of borderline patients in unstressed conditions may not advance our understanding of their vulnerability to this kind of symptom exacerbation. We have therefore employed a strategy of using pharmacologic challenges to explore the biological mechanisms that may underlie these episodes. If a pharmacologic challenge produces a distinctive clinical state typical of naturally occurring episodes, then the known biological effects of the drug may give an insight into the neurobiology of the episodes. This strategy is similar to that employed in panic disorder research (1).

Methylphenidate and amphetamines, stimulants that enhance dopamine activity by releasing intraneuronal stores, have been administered orally and intravenously to normal subjects and psychiatric patients (2–8). As part of an ongoing study at the National Institute of Mental Health, we studied the responses of patients with borderline personality disorder (N=3), major depressive episodes (N=4), and schizophrenia (N=5) in a randomized, placebo-controlled, double-blind methylphenidate infusion study. Two patients with borderline personality disorder experienced clin-

ical responses to the methylphenidate that closely resembled their spontaneously occurring dysphorias. In this paper we will present their case reports.

Both patients met *DSM-III* criteria for borderline personality disorder; had scores on the Diagnostic Interview for Borderline Patients above 7; did not have current *DSM-III* axis I diagnoses, significant medical problems, or abnormal EEGs; and had taken no medication during the 3 weeks before the study. After giving informed consent, the patients received placebo or methylphenidate (0.3 mg/kg i.v.) over 2 minutes in two sessions separated by at least 3 days. The patient, nurse, and physician rater were blind to the medication. A nonblind physician monitored blood pressure, pulse, and ECG strips during the infusion.

CASE REPORTS

Case 1. Mr. A was a 38-year-old, married, unemployed white man with lifelong problems of depression, anger, identity disturbance, and difficulties with relationships. There had been no periods of psychosis except for a brief episode related to medication toxicity. He described frequent periods of severe dysphoria distinct from his chronic depression that were often precipitated by rejection, interpersonal stress, or self-perceived failures but which also occurred spontaneously, especially at night. These dysphorias were characterized by overwhelming, poorly differentiated affects best described as fear and rage, the latter directed primarily at himself. He also experienced a strong unpleasant sensation in the abdomen, feelings of derealization and depersonalization, loss of speech, confusion, déjà vu and other perceptual distortions, sexual feelings, and extreme motor restlessness. These episodes could develop abruptly or build gradually over several days, would last from several minutes to an hour, and would either subside spontaneously or be terminated by violent destruction of physical objects or head banging, which resulted in relief from the tension. He stated that he felt as though he were fighting something within him which he called "it," "the dragon," and "the bitch," and he had strong impulses to multilate or kill himself in order to be

The placebo infusion produced no subjective or objective changes. The methylphenidate response was dramatic; within a few minutes after the infusion Mr. A experienced nausea and motor agitation. Soon thereafter he began thrashing about uncontrollably and appeared to be very angry, displaying facial grimacing, grunting, and shouting.

Received Sept. 25, 1986; revised April 22, 1987; accepted July 27, 1987. From the Clinical Neuroscience Branch and the Office of the Clinical Director, NIMH. Address reprint requests to Dr. Lucas, Department of Psychiatry (116A), VA Medical Center, 16111 Plummer St., Sepulveda, CA 91343.

Pulse and blood pressure were significantly elevated, peaking concomitantly with maximal behavioral effects. Blood pressure reached 155/84 mm Hg and pulse 159 beats/minute, compared with baselines of 117/67 mm Hg and 78 beats/minute. Fifteen minutes after the infusion he shouted, "It's coming at me again—like getting out of control—it's stronger than I am." He slammed his fists into the bed and table and implored us not to touch him, warning that he might become assaultive.

Gradually over the next half-hour Mr. A calmed down and began to talk about his experience. He maintained that throughout the episode he had remained oriented and aware of the staff's presence but feared loss of control of his violent impulses toward us and himself. He described the episode as identical to those he had experienced at home. At no time did he experience auditory or visual hallucinations. Residual effects included a sense of fatigue and mild depression, which cleared by the following day.

Case 2. Mr. B, a 35-year-old, never married, unemployed white man, had chronic symptoms of depression, anxiety, suicidal ideation, low self-esteem, and poor social relationships. He reported no psychotic symptoms or suicide attempts, although he had threatened suicide in a manipulative fashion. Mr. B had experienced frequent periods of dysphoria which were usually precipitated by rejection, failure, or physical illness but which sometimes occurred spontaneously. The symptoms included feelings of anxiety, tension, frustration, fear, and anger accompanied by nausea, depersonalization and derealization, strong self-deprecating thoughts, and screaming. The dysphoria often culminated in behavioral regression, including his assuming a fetal position, feeling helpless, and wanting to be held or rescued. These episodes were usually of only a few hours' duration, and Mr. B. often relieved his dysphoria by hitting himself on his head and body.

Placebo produced no subjective or objective response. Methylphenidate evoked a reaction described as very similar to, although of a somewhat lesser intensity than, Mr. B's usual dysphoric episodes. He developed agitation, nausea, abdominal cramping, and tightness in the chest accompanied by marked anxiety and fear, confusion, difficulty expressing himself, some sensory distortions, a constant need for reassurance, wishes to be held and physically comforted, feelings of helplessness and despondency, and negative thoughts about himself. Pulse and blood pressure were significantly elevated and peaked concurrently with the peak behavioral activation at 156 beats/minute and 166/94 mm Hg, respectively, compared to baseline values of 64 beats/minute and 134/83 mm Hg.

Unifocal premature contractions were noted on continuous ECG monitoring. The peak dysphoria lasted 10–15 minutes. Two hours after the infusion most of these symptoms had subsided, and the cardiovascular measures had returned to baseline levels.

DISCUSSION

In the two cases reported here, acute methylphenidate infusions elicited pronounced dysphorias mimicking those which occur spontaneously in borderline patients without pharmacologic provocation. The most striking aspects of the clinical responses were their frightening intensity and their remarkable similarity to the patients' "typical" episodes. We are unaware of other reports that specifically address the dimension of typicality as we did by interview and subjective ratings.

Ten additional patients (five with schizophrenia, four with major depressive episodes, and one with borderline personality disorder) participated in the methylphenidate protocol. Doses varied from 0.1 to 0.5 mg/ kg per infusion. To summarize the findings in these patients, the schizophrenic patients experienced moderate activation and exacerbation of existing psychotic symptoms, while the depressed patients experienced mild to moderate improvement in their mood. The additional patient with borderline personality disorder (who received 0.15 mg/kg) showed mild activation and improvement in her mood without any precipitation of her typical dysphoric symptoms. Because of the occurrence of premature ventricular beats observed in two patients even at low doses of methylphenidate (one patient with borderline personality disorder received 0.3 mg/kg and one depressed patient received 0.15 mg/ kg) (9), the marked hypertension and tachycardia observed in several patients, and the dramatic clinical responses, we discontinued the research protocol.

Methylphenidate and amphetamines, which enhance dopaminergic and noradrenergic activity, have been administered acutely in both an oral and intravenous manner to normal subjects and psychiatric patients. Both types of administration appear to produce characteristic responses, and while doses vary among studies, typical responses to the stimulant challenge can be described. Normal subjects commonly demonstrate an activating and mood-elevating effect from these substances (2). Actively psychotic schizophrenic patients and some manic patients (but not those in remission) respond with an increase in psychosis (5-7). Depressed patients commonly experience activation and mood elevation, although some patients, especially those with agitated depressions (3) or "hysterical" symptoms or traits (4), develop dysphoric episodes. Janowsky et al. (5) and Silberman et al. (3) reported dysphoric responses in a subpopulation of their depressed patients; they did not note whether the dysphoric symptoms had previously occurred in these patients under other conditions.

Huey et al. (7) found a significant increase over baseline in dysphoria (i.e., depression, anxiety, and irritability) in patients with personality disorders (type unspecified) who were given methylphenidate in doses of 10 mg and 20 mg. Schulz et al. (8) reported that some borderline patients given oral amphetamine demonstrated psychotic symptoms that, on careful review of the case histories provided, can be classified primarily as perceptual, affective, and cognitive disturbances rather than frank delusions or hallucinations. Perhaps an assessment of the degree of usualness of the symptoms in these studies would have helped to assess whether the stimulants triggered typical dysphoric episodes or produced atypical symptoms de novo.

The mechanism by which methylphenidate produces

dysphoric symptoms in these patients is uncertain. However, since methylphenidate preferentially enhances dopamine activity by acute release of intraneuronal stores of this transmitter (10), with lesser effects on other neurotransmitters (2, 6, 11), dysphorias in borderline patients may be mediated through dopaminergic mechanisms. This notion is consistent with the observed efficacy of neuroleptics in treating some symptoms of borderline personality (12, 13). Alternatively, these patients may be responding to this acute stress in a manner that is stereotypical of their response to other stresses. Anxiety of a psychological or physical etiology that reaches a certain critical threshold may overwhelm weak ego defenses and thus trigger dysphoria through a predominantly psychological mechanism.

A third possible mechanism for these effects is that the general, almost universal, psychomotor activation which occurs with stimulant challenge produces psychological and behavioral disinhibition, and the resultant increase in talkativeness allows the patient to report material usually not revealed. While this phenomenon may occur in schizophrenic patients whose withdrawal and autistic behavior interfere with verbalization of symptoms, it is unlikely in our borderline patients. Both were highly verbal and stated before the infusion that they were free of dysphoric symptoms.

The induction of characteristic dysphoric responses in two borderline patients by methylphenidate infusion suggests that the pharmacologic challenge model used in other episodic disorders may also help delineate the biochemical substrates of episodic dysphorias in borderline individuals. However, the severity of psychiatric symptoms and cardiovascular response produced by methylphenidate may limit its use as a pharmacologic probe in borderline personality disorder.

- 1. Liebowitz MR, Gorman JM, Fyer AJ, et al: Lactate provocation of panic attacks, II: biochemical and physiological findings. Arch Gen Psychiatry 1985; 42:709–719
- Brown WA, Corriveau DP, Ebert MH: Acute psychological and neuroendocrine effects of dextroamphetamine and methylphenidate. Psychopharmacology 1978; 58:189–195
- Silberman EK, Reus VI, Jimerson DC, et al: Heterogeneity of amphetamine response in depressed patients. Am J Psychiatry 1981; 138:1302–1307
- Kiloh LG, Neilson M, Andres G: Response of depressed patients to methylamphetamine. Br J Psychiatry 1974; 125:496–499
- Janowsky DS, El-Yousef MK, Davis JM, et al: Provocation of schizophrenic symptoms by intravenous administration of methylphenidate. Arch Gen Psychiatry 1973; 28:185-191
- Janowsky DS, Davis JM: Methylphenidate, dextroamphetamine, and levamfetamine. Arch Gen Psychiatry 1976; 33:304

 308
- Huey LY, Janowsky DS, Judd L, et al: Effects of methylphenidate in adult psychiatric inpatients: a preliminary report. Psychopharmacol Bull 1984; 20:10–17
- Schulz SC, Schulz PM, Dommisse C, et al: Amphetamine response in borderline patients. Psychiatry Res 1985; 15:97– 108
- Lucas PB, Gardner DL, Wolkowitz OM, et al: Methylphenidate-induced cardiac arrhythmias (letter). N Engl J Med 1986; 315:1485
- Sayers AC, Handley SL: A study of the role of catecholamines in response to various central stimulants. Eur J Pharmacol 1973; 23:47-55
- 11. Kuczenski R: Biochemical actions of amphetamine and other stimulants, in Stimulants: Neurochemical, Behavioral and Clinical Perspectives. Edited by Creese I. New York, Reven Press, 1983
- Goldberg SC, Schulz SC, Schulz PM, et al: Borderline and schizotypal personality disorders treated with low-Jose thiothixene vs placebo. Arch Gen Psychiatry 1986; 43:680–686
- Soloff PH, Anselm G, Nathan RS, et al: Progress in pharmacotherapy of borderline disorders: a double-blind study of amitriptyline, haloperidol, and placebo. Arch Gen Psychiatry 1986; 43:691–696

Psychiatric Illness in the Mothers of Anxious Children

Cynthia G. Last, Ph.D., Michel Hersen, Ph.D., Alan E. Kazdin, Ph.D., Greta Francis, Ph.D., and Henry J. Grubb, Ph.D.

The authors compared maternal lifetime psychiatric illness for children with separation anxiety disorder and/or overanxious disorder (N=58) and for children who were psychiatrically disturbed but did not manifest an anxiety or affective disorder (N=15). The vast majority (83%) of mothers of children with separation anxiety disorder and/or overanxious disorder had a lifetime history of an anxiety disorder. Moreover, over one-half (57%) of the mothers presented with an anxiety disorder at the same time at which their children were seen for similar problems. Both of these rates significantly differed from those obtained for control subjects.

(Am J Psychiatry 1987; 144:1580–1583)

I trepeatedly has been hypothesized that the mothers of children with anxiety disorders are psychiatrically disturbed and that their psychopathology plays a major causal role in their children's illness, either through genetic (1) or environmental (2, 3) transmission. Although a number of clinical reports have appeared on the topic, to our knowledge only three controlled investigations have been published (4–6).

Berg et al. (4) evaluated maternal psychiatric illness by examining the hospital records of 100 school phobic adolescents and a control group of 100 psychiatrically disturbed adolescents without school phobia. One-fifth of the mothers in both groups had a history of some type of psychiatric disturbance. Of these, approximately one-half were diagnosed as having an affective disorder, which was defined as anxiety, depression, or phobias. Gittelman-Klein (5) interviewed the parents of 42 school phobic and 42 hyperactive children to determine their psychiatric histories. Results were analyzed for three specific diagnostic categories: major depression, specific phobias, and separation anxiety disorder. No differences appeared between the two groups of parents for major depression

or specific phobias. However, the parents of school phobic youngsters were found to have a significantly higher rate of separation anxiety disorder than parents in the control group. Unfortunately, data were not presented separately for the mothers and fathers of these children.

More recently, Livingston et al. (6) evaluated lifetime psychiatric illness in the relatives of 12 anxious and 11 depressed children by using the Family History Research Diagnostic Criteria (7). Major depression and alcoholism were the two most common diagnoses in both groups. Contrary to expectation, very few of the relatives in the anxiety group were diagnosed as having an anxiety disorder.

To build upon these prior studies, we conducted an evaluation of lifetime psychiatric illness in the mothers of anxious children by using a large sample size (N=58) and an approach specifically designed to overcome the methodological limitations of prior work. Mothers were interviewed directly with a structured diagnostic interview and diagnosed by application of DSM-III criteria. Interviewers were unaware of children's diagnoses, and diagnostic agreement was evaluated by having a second clinician, also blind to children's diagnoses, independently score audiotapes of the interviews. Finally, rates of psychiatric illness in the mothers of anxious children were compared to those obtained from a psychopathological control group, which consisted of mothers of children who were psychiatrically disturbed but did not manifest an anxiety or affective disorder.

METHOD

The mothers of anxious and control children served as subjects in this study. Anxious children were evaluated in the Child and Adolescent Anxiety Disorder Clinic at Western Psychiatric Institute and Clinic during a 20-month period (September 1984 through April 1986). During the same time period, control children were recruited from the general child outpatient clinic at the same institution. All children were administered a semistructured diagnostic interview, the Interview Schedule for Children (unpublished 1978 and 1983 papers by M. Kovacs), and diagnosed according to DSM-III criteria by a child clinical psychologist. Research by our group has shown high levels of diagnos-

Received Nov. 20, 1986; revised May 26, 1987; accepted July 27, 1987. From the Department of Psychiatry, Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine. Address reprint requests to Dr. Last, Western Psychiatric Institute and Clinic, 3811 O'Hara St., Pittsburgh, PA 15213.

Supported in part by NIMH grant MH-00546. Copyright © 1987 American Psychiatric Association.

tic agreement (κ =0.64 to 1.00) in using this instrument for a wide range of childhood psychiatric disorders (8).

All anxious children included in the study received the diagnosis of separation anxiety disorder (N=19) or overanxious disorder (N=22) or both (N=17). Inclusion criteria for the control group were as follows: 1) any DSM-III axis I diagnosis not indicative of an anxiety or affective disorder and 2) no significant anxiety or affective symptoms. Children in the control group (N=15) were diagnosed as having conduct disorder (N=6), attention deficit disorder (N=5), or oppositional disorder (N=4). Four of the children with conduct disorder also were diagnosed as having a concurrent attention deficit disorder.

Mothers were interviewed about their own psychiatric histories with the Structured Clinical Interview for DSM-III—Non-Patient Version (unpublished 1984 and 1985 papers by R| Spitzer and J.B.W. Williams) by a clinical psychologist who was blind to the children's diagnoses. This instrument is a DSM-III-based structured diagnostic interview that covers both current and past episodes of psychiatric illness. Interrater reliability for diagnoses made with this instrument was evaluated by having a second clinician, also blind to the children's diagnoses, independently score audiotapes of approximately three-quarters (71%) of the interviews. Overall diagnostic agreement between the two clinicians was 86%. Agreement for anxiety and affective disorders was 84% and 95%, respectively.

RESULTS

Demographic Characteristics

Children in each of the proband groups (separation anxiety disorder, overanxious disorder, both disorders, and control) were compared with respect to age at intake, sex, and face. The four groups differed significantly in age at intake (separation anxiety disorder=9.1 years, overanxious disorder=13.9, both disorders=9.8, and control=10.3) (F=8.95, df=3, p<.001). Pairwise comparisons with Neuman-Keuls multiple comparison tests revealed that children with overanxious disorder were significantly older than children in each of the other groups (overanxious disorder versus separation anxiety disorder and versus separation anxiety disorder and overanxious disorder, p<.001; versus control children, p<.005). No significant differences emerged for sex or race. A more detailed report on the demographic characteristics and patterns of comorbidity of the three anxiety groups can be found elsewhere (8).

The mean ages of the mothers in each of the four groups also were compared and showed a significant difference (separation anxiety disorder=36.4 years, overanxious disorder=42.9, both disorders=36.6, and control=33.7) (F=5.29, df=3, p<.005). As would be expected from their children's ages, pairwise compar-

isons revealed that mothers of children with overanxious disorder were significantly older than mothers in each of the other groups (overanxious disorder versus separation anxiety disorder, p<.05; versus separation anxiety disorder and overanxious disorder, p<.05; versus control children, p<.005). The separation anxiety disorder, overanxious disorder, and separation anxiety disorder and overanxious disorder groups did not differ for maternal age.

Maternal Psychiatric Illness

The lifetime rates of DSM-III anxiety and affective disorders among mothers of children with separation anxiety disorder, overanxious disorder, or both disorders and mothers of control children are presented in table 1. As indicated, the majority of mothers in each of the anxiety groups had a lifetime history of at least one anxiety disorder. Although mothers in the group with both anxiety disorders had the highest rate of anxiety disorders, with almost every mother in this group showing a lifetime history of an anxiety disorder, differences among the three anxiety groups were not statistically significant. When these three groups were combined and compared to the control group, differences in the rates of anxiety disorders were highly significant (χ^2 =9.21, df=1, p<.005). Given this significant difference, we considered age-correcting these rates. However, since anxiety disorders have an early age at onset (i.e., childhood through early adulthood), age correction would not have altered the rates.

At least half of the mothers in each of the anxiety groups had a history of an affective disorder, and the rates of affective disorders for mothers of anxious children were higher than the rate for mothers of control children; however, differences between these groups were not statistically significant. Most of the mothers in all four groups who met the criteria for a history of an affective disorder received the diagnosis of major depression (separation anxiety disorder=91%, overanxious disorder=64%, separation anxiety disorder and overanxious disorder=82%, control=80%), with no significant differences among the groups for a history of this diagnosis.

Current rates of anxiety and affective disorders also were examined in the four groups. As observed for lifetime rates of anxiety disorders, the three anxiety groups did not differ in their current rates of anxiety disorders but did differ significantly when combined and compared to the control group (separation anxiety disorder=47%, N=9; overanxious disorder=64%, N=14; separation anxiety disorder and overanxious disorder=64%, N=11; control=20%, N=3) (χ^2 = 5.10, df=1, p<.05). There were no significant differences among any of the groups for current rates of affective disorders (separation anxiety disorder = 32%, N=6; overanxious disorder=23%, N=5; separation anxiety disorder and overanxious disorder=24%, N=4; control=7%, N=1) or major depression (separation anxiety disorder=21%, N=4; overanxious

TABLE 1. Lifetime Rates of DSM-III Anxiety and Affective Disorders in Mothers of Children With Separation Anxiety Disorder and/or Overanxious Disorder and Mothers of Control Children

			Moth	ners With Lifetin	me Diagnos	nosis								
				Mot	hers of Anx	ious Children	1							
	Contro	thers of I Children (=15)	Disor	on Anxiety der Only =19)	Disor	anxious der Only =22)	Both Anxiety Disorders (N=17)							
DSM-III Diagnosis	N	%	N	%	N	%	N	%						
Any anxiety disorder (N=54)	6	40.0	13	68.4	19	86.4	16	94.1						
Any affective disorder (N=38)	5	33.3	11	57.9	11	50.0	11	64.7						
Major depression (N=30)	4	26.7	10	52.6	7	31.8	9	52.9						

TABLE 2. Lifetime Rates of Specific DSM-III Diagnoses in Mothers of Children With Separation Anxiety and/or Overanxious Disorder and Mothers of Control Children

			Mot	hers With Lifet	ime Diagnos	is		
				Mo	thers of Anx	ious Childrer	1	
	Control	hers of Children =15)	Separation Anxiety Disorder Only (N=19)		Overanxious Disorder Only (N=22)		Both Anxie Disorders (N=17)	
DSM-III Diagnosis	N	%	N	%	N	%	N	%
Agoraphobia	0	0.0	1	5.3	0	0.0	2	11.8
Social phobia	3	20.0	1	5.3	4	18.2	4	23.5
Simple phobia	2	13.3	3	15.8	5	22.7	7	41.2
Obsessive-compulsive disorder	0	0.0	1	5.3	2	9.1	2	11.8
Generalized anxiety disorder	3	20.0	9	47.4	10	45.5	8	47.1
Panic disorder	1	6.7	1	5.3	2	9.1	4	23.5
Posttraumatic stress disorder	0	0.0	3	15.8	2	9.1	3	17.6
Major depression	4	26.7	10	52.6	7	31.8	9	52.9
Dysthymic disorder	2	13.3	5	26.3	4	18.2	2	11.8
Substance abuse	1	6.7	2	10.5	2	9.1	2	11.8
Other diagnosis	4	26.7	3	15.8	3	13.6	2	11.8
Any diagnosis	11	73.3	14	73.7	20	90.9	16	94.1
One diagnosis	6	40.0	3	15.8	8	36.3	2	11.8
Two or more diagnoses	5	33.3	11	57.9	12	54.5	14	82.3
Two or more anxiety diagnoses	2	13.3	5	26.3	7	31.8	9	52.9
No diagnosis	4	26.7	5	26.3	2	9.1	1	5.9

disorder=9%, N=2; separation anxiety disorder and overanxious disorder=12%, N=2; control=0%).

Because of the relatively high lifetime rates of affective disorders, and, particularly, major depression, in the mothers of anxious children, these data were analyzed further by comparing 1) children with separation anxiety disorder who had a concurrent major depression (N=11) with those who did not (N=25), and 2) children with overanxious disorder who had a concurrent major depression (N=9) with those who did not (N=13). For mothers of children with separation anxiety disorder, overall rates of affective disorders did not differ according to whether the child had a concurrent major depression (separation anxiety disorder with major depression=46%, N=17; separation anxiety disorder without major depression=68%, N=5). However, contrary to expectation, there was a tendency for the rate of major depression to be higher in mothers of children with separation anxiety disorder who did not have a concurrent major depression than in mothers of children with separation anxiety disorder who did receive this diagnosis (separation

anxiety disorder with major depression=27%, N=3; separation anxiety disorder without major depression=64%, N=16) (χ^2 =2.79, df=1, p<.10). For mothers of children with overanxious disorder, rates of affective disorders (overanxious disorder with major depression=56%, N=5; overanxious disorder without major depression=46%, N=6) and major depression (overanxious disorder with major depression=44%, N=4; overanxious disorder without major depression=23%, N=3) did not differ according to whether the children had a concurrent major depression.

The lifetime rates of specific DSM-III diagnoses for mothers in the four groups are depicted in table 2. As can be observed, generalized anxiety disorder and major depression were the two most common diagnoses for mothers in the anxiety groups. In addition, the group with separation anxiety disorder and overanxious disorder had a very high percentage of mothers with a history of simple phobia. As expected, this group had the highest percentage of mothers with two or more diagnoses and the highest percentage of

mothers with two or more anxiety diagnoses. There were no statistically significant differences among the groups for any of the diagnoses.

DISCUSSION

Our study indicates that the vast majority (83%) of mothers of our clinic sample of children with separation anxiety disorder and/or overanxious disorder had a lifetime history of an anxiety disorder. Moreover, approximately one-half of the mothers presented with an anxiety disorder at the same time at which their children were seen at our clinic for similar problems.

Previous research has shown that children of adult patients with anxiety disorders are at higher risk for developing anxiety disorders (1, 9). However, to our knowledge our investigation is the first to demonstrate clearly that the converse of this finding also is true, at least for the mothers of these children.

Contrary to expectation, we did not find a higher rate of affective disorders, or major depression, among the mothers of children with anxiety disorders. While it is possible that a statistically significant difference might have emerged between mothers in the anxiety and control groups had we included a larger control group, we wish to point out that previous research on this issue has yielded mixed findings. More specifically, while some studies have reported a higher prevalence of affective disorders among the relatives of probands with anxiety disorders (6, 10), others have not (9, 11). Given these conflicting findings, it is evident that further studies are needed to clarify the familial relationship between anxiety and affective disorders.

Results from our investigation revealed a strong association between anxiety disorders in mothers and their children. It should be noted, however, that our findings are based on a clinical sample of *psychiatrically referred* children and most probably are not

representative of the population of anxiety disorder children at large. Epidemiological studies of community samples of children and their families are needed to overcome referral biases that are inherent in this type of clinical research. In addition, since we only interviewed mothers, it is unclear whether the relationship for anxiety disorders is specific to the motherchild dyad or is indicative of a more general pattern of familial aggregation. Currently, we are conducting a large-scale family study of this population in order to fully address this question.

- Weissman MM, Leckman JF, Merikangas KR, et al: Depression and anxiety disorders in parents and children: results from the Yale family study. Arch Gen Psychiatry 1984; 41:845–852
- Eisenberg L: School phobia: a study in the communication of anxiety. Am J Psychiatry 1958; 114:712-718
- Prince GS: School phobia, in Foundations of Child Psychiatry. Edited by Miller E. London, Pergamon Press, 1968
- Berg I, Butler A, Pritchard J: Psychiatric illness in the mothers of school-phobic adolescents. Br J Psychiatry 1974; 125:466–467
- Gittelman-Klein R: Psychiatric characteristics of the relatives of school phobic children, in Mental Health in Children. Edited by Sankar DVS. New York, PJD Publications, 1975
- Livingston R, Nugent H, Rader L, et al: Family histories of depressed and severely anxious children. Am J Psychiatry 1985; 142:1497-1499
- 7. Endicott J, Andreasen N, Spitzer R: Family History Research Diagnostic Criteria. New York, New York State l'sychiatric Institute, Biometrics Research, 1975
- 8. Last CG, Hersen M, Kazdin AE, et al: Comparison of DSM-III separation anxiety and overanxious disorders: demographic characteristics and patterns of comorbidity. J Am Acad Child Psychiatry 1987; 26:527–531
- Harris EL, Noyes R, Crowe RR, et al: Family study of agoraphobia: report of a pilot study. Arch Gen Psychiatry 1983; 40: 1061–1064
- Munjack DJ, Moss HB: Affective disorder and alcoholism in families of agoraphobics. Arch Gen Psychiatry 1981; 38:869– 874
- 11. Crowe RR, Noyes R, Pauls DL, et al: A family study of panic disorder. Arch Gen Psychiatry 1983; 40:1065–1069

Accelerometric Assessment of Tardive Dyskinesia

Warren W. Tryon, Ph.D., and Bennett Pologe, M.A.

Accelerometric measures associated with resting the hand, posturing the arm, and moving the arm were taken in 10 patients with tardive dyskinesia and eight schizophrenic patients matched for diagnosis, age, sex, likelihood of medication to induce extrapyramidal symptoms, and chlorpromazine-equivalent dose. A multivariate analysis of variance and follow-up univariate analyses revealed that the tardive dyskinesia patients showed 1) greater amplitude of dyskinetic movements, 2) lower peak frequency of dyskinetic movements, and 3) more spikes—points beyond four standard deviations from the mean. Multiple discriminant analyses revealed that all patients were correctly classified as to presence or absence of tardive dyskinesia.

(Am J Psychiatry 1987; 144:1584–1587)

common method of assessing tardive dyskinesia A is to use a standard rating scale, such as the Abnormal Involuntary Movement Scale (AIMS) (1; 2; 3, pp. 301-304), the Simpson Tardive Dyskinesia Rating Scale (2; 3, pp. 301–304), or the Smith Tardive Dyskinesia Scale (2). Another approach involves counting the number of oral dyskinetic movements (4-9). These visual approaches have strong face validity, but a major shortcoming of them is that tardive dyskinesia must be obvious before a positive diagnosis can be made (10) and, consequently, must have been present for several months, if not years (3, pp. 39–80). Moreover, they suffer all of the weaknesses that human rating systems have when compared to objective measurement systems, particularly intra- and interrater variance.

Several methods for obtaining objective measures of dyskinetic movements have been tried with considerable success (4, 5, 11, 12). One approach is to place the balloon of a pneumatic transducer in the mouth to measure buccal and lingual movements (13, 14). Hand

Received July 28, 1986; revised Dec. 15, 1986, and April 27, 1987; accepted July 27, 1987. From the Department of Psychology, Fordham University, and the Manhattan Psychiatric Institute, New York. Address reprint requests to Dr. Tryon, Department of Psychology, Fordham University, Bronx, NY 10458.

The authors thank Jan Volavka, M.D., for his cooperation with

movements can be recorded by placing a pencil-size pressure transducer between the third and fourth fingers (13, 14). Measurements obtained in these ways show striking differences between a normal subject and a subject with tardive dyskinesia. Progressive decreases in symptoms of the mouth and hands were reported as deanol was administered in doses of 600, 800, 1200, and 1600 mg/day over 62 days (14). Similar objective measures have been validated against five rating scales (11). These findings clearly validate both of these objective assessment procedures.

Another approach to the measurement of dyskinesia involves attaching a piezoelectric accelerometer to the limb and measuring abnormal movements at rest and during an abduction/adduction task (15). Although tremor is not included as a sign of tardive dyskinesia (3, pp. 39–80), it has been shown that tremographic procedures are excellent measures of extrapyramidal system function (16–18). Correlations of .7 to .9 were reported between tremographic measurements and standard ratings of extrapyramidal symptoms when at least a dozen repeated pairs of measurements were taken (17). The authors reported, "This was true even if digital tremor was not an important part of the [extrapyramidal] syndrome for that patient, indeed, even if his digital tremor was not clinically apparent. Because of this we used tremography measures as a constant and quantitative marker for [extrapyramidal symptoms]" (emphasis added) (16, p. 170). Power spectral analysis of tremographic records has yielded particularly interesting results. The power spectrum for patients with tardive dyskinesia is clearly different from that for normal subjects in that it involves 1) overall greater power (amplitude) and 2) distinctly greater power at the low frequency end of the spectrum (17). It is fortunate that tremographic procedures are excellent measures of extrapyramidal symptoms, since evidence (10, 19, 20) suggests that drugs which produce extrapyramidal symptoms also produce tardive dyskinesia.

The present study was based on two aspects of the tremographic findings just discussed. The first findings are that tremor can be measured even when not clinically visible and that drugs which induce extrapyramidal side effects also tend to induce tardive dyskinesia. The second group of findings concerns the greater overall tremographic power (amplitude) and greater power at the low frequency end of the spectrum among patients with tardive dyskinesia. Addi-

this research.

Copyright © 1987 American Psychiatric Association.

tional support comes from pressure measurements taken between the fingers, which indicate digital involvement in tardive dyskinesia (14). Hence, it was hypothesized that accelerometric measurements of limb dyskinesia would discriminate patients with tardive dyskinesia from patients without it.

METHOD

Ten subjects with schizophrenia who met the Schooler and Kane diagnostic criteria for tardive dyskinesia (21) were identified from a register of tardive dyskinesia patients maintained by the research ward of the Manhattan Psychiatric Institute. No evidence of Parkinson's disease was found in their medical records, and no subject was taking anticholinergic medication. No clinical evidence of tremor was noted. Direct assessments of rigidity and bradykinesia were not made. Informed consent was obtained from each patient after the nature of the procedures was explained.

The mean±SD rating of these patients on the first seven items of the AIMS was 11.93±2.64 which indicates that the subjects' symptoms involved more than one site. Eight schizophrenic control subjects who did not meet these diagnostic criteria for tardive dyskinesia were also selected. The AIMS rating for these subjects was zero. The second author was trained to make AIMS ratings by a research staff member until the disagreements between the second author and the research staff person were less than or equal to the disagreements among members of the research staff.

The eight control subjects were matched as a group to the tardive dyskinesia subjects on the basis of diagnosis, sex, age, likelihood of medication to induce extrapyramidal symptoms, and chlorpromazine-equivalent dose. Each subject was taking a single neuroleptic medication, although not all subjects were taking the same medication. Each medication was judged to have a low, medium, or high probability of inducing extrapyramidal symptoms on the basis of information provided by the McNeil Pharmaceutical company (22). Group matching on this variable was assessed by conducting a 2×3 chi-square analysis of the interaction of group (tardive dyskinesia versus control) and drug potential for extrapyramidal symptoms (low, medium, or high). The very low and nonsignificant result ($\chi^2 = 0.59$, df=3, p>.70) indicates that the group matching was successful. Chlorpromazine-equivalent doses were calculated on the basis of the table published by Jeste and Wyatt (3, p. 3). Group matching on this variable was assessed by conducting an independent-groups t test. The very low and nonsignificant result (t=0.10, df=16, p>.90) indicates that the group matching was successful.

All data were recorded with Applied Autonomics Corporation's Model 201 Movement Analyzer. A

1.8-g piezoelectric accelerometer was mounted on a 0.7 cm square, 10 cm long balsa wood splint so that its vertical axis was 8 cm from one end. The splint was taped on top of the right index finger with the end farthest from the accelerometer over the ventral crease, where the first phalange attaches to the shaft of the metacarpus (i.e., near the knuckle). The lead from the accelerometer was connected to the preamplifier of the movement analyzer. Because accelerometry is capable of detecting subclinical phenomena and because tardive dyskinesia was assumed to have symptoms at multiple body sites, it was deemed unnecessary to measure bilaterally or to measure the feet, hence, movement at only a single site of attachment was measured.

Five 20-second data samples were digitized onto magnetic tape at 51.2 Hz; the interval between trials was 25 seconds. The data were collected while the subject maintained each of three postures. The first position involved the hand at rest. The arm was supported up to the wrist, thereby allowing movement about the wrist and knuckle. The second position involved pronating the arm, hand, and fingers horizontally at shoulder height. The third posture involved a finger-to-nose intentional movement starting from the second position. The experimenter modeled the behavior at a 0.3-Hz pace throughout each recording interval to better standardize this behavior.

RESULTS

Three predictors of the patient's tardive dyskinesia diagnostic group were selected on the basis of a table of first order intercorrelations. The first variable chosen was total power. This is a measure of the amplitude of the dyskinetic process. It is measured in milli-g (mg) units, where 1 g = 9.8 m/second/second. The second variable was the peak frequency of the dyskinetic process, measured in hertz. The third variable was the number of "spikes," the data points lying beyond four standard deviations from the mean. Zero (less than 1) spikes are expected by chance given that 5,120 data points were collected for each posture for each subject. This expectation was calculated by multiplying 5,120 by 0.00003, the proportion of the area lying under the normal curve beyond four standard deviations (Z=4.0); the product is 0.15.

Table 1 presents the means, standard deviations, and ranges concerning the three variables for both patient groups during each posture: 1) resting the hand, 2) posturing the arm, and 3) moving the arm. The patients with tardive dyskinesia had considerably greater dyskinesia amplitude (power) than the schizophrenic control subjects in all three postures, a lower peak frequency in the resting hand and posturing arm postures, and a somewhat lower frequency in the moving arm posture. The tardive dyskinesia subjects evidenced significantly more spikes during the resting hand and moving arm postures than did the control

TABLE 1. Accelerometric Measurements in Three Postures for 10 Patients With Tardive Dyskinesia and Eight Schizophrenic Control Patients

	ТТ	otal Power (mg)	Peak Frequency (Hz)			Number of Spikes ^a		
Posture and Group	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Resting hand						WALLAND TO THE TENT OF THE TEN		Walter State of the State of th	
Tardive dyskinesia patients	88.59	80.04	17-235	5.86	1.45	3-8	29.50	20.60	3-72
Control patients	28.39	22.14	8-70	7.13	1.67	5-9	14.36	6.42	7-25
Posturing arm									
Tardive dyskinesia patients	125.42	110.34	38-409	6.62	2.03	39	16.09	10.26	0-30
Control patients	51.82	19.44	32-89	8.47	1.86	7–13	13.25	11.09	0-29
Moving arm									
Tardive dyskinesia patients	210.08	79.90	106-332	6.52	2.47	310	14.70	7.78	4-26
Control patients	152.74	42.03	104-241	7.00	2.00	3-10	4.63	2.13	2-8

^aData points lying beyond four standard deviations from the mean.

subjects, and a lesser effect was associated with the posturing arm posture. After finding nonsignificant departures from normality (skewness and kurtosis) in the vast majority of instances, we calculated a Hotelling's T² value with the multivariate analysis of variance (MANOVA) SPSS-X procedure for each posture regarding the three predictors: total power, peak frequency, and number of spikes. The Hotelling's T2 (df=6, 26) for the resting hand posture equalled 84.52 (p<.001). The univariate analyses of variance for the three predictors yielded the following F ratios (df=2, 16): 11.12, 156.15, and 20.17, respectively (all p<.001). The Hotelling's T² for posturing the arm equalled 38.07 (p<.001). The univariate analyses of variance for the three predictors yielded the following F ratios (df=2, 16): 12.74, 131.81, and 17.67, respectively (all p<.001). The Hotelling's T² (df=6, 26) for movement of the arm equalled 33.81 (p<.001). The univariate analyses of variance for the three predictors yielded the following F ratios (df=2, 16): 71.94, 79.00, and 32.39, respectively (all p<.001). Hence, the three predictors taken as a single vector significantly discriminated the subjects with tardive dyskinesia from the schizophrenic control subjects without tardive dyskinesia in each of the three postures, indicating that all three predictors are statistically important to this discrimination.

In a two-group experimental design such as the present one, any variable that significantly discriminates between the two groups will be significantly correlated with the AIMS score, since the groups were established on the basis of the AIMS score.

Three discriminant analyses were performed on the data sets from the three postures by using the three predictors. The rule that a person is diagnosed as having tardive dyskinesia if he or she is classified as having tardive dyskinesia on the basis of any one of the three discriminant functions resulted in complete (100%) discriminability. Entering all nine predictors into a single discriminant analysis, despite the small sample size, also resulted in complete (100%) discriminability. All tardive dyskinesia subjects were correctly placed in the tardive dyskinesia group, and all control subjects were correctly placed in the control group. No misclassifications occurred.

DISCUSSION

The results of this study clearly indicate that subjects with tardive dyskinesia have greater dyskinesia (total power and number of spikes) at a lower dominant frequency than control subjects. This pattern is sufficiently strong and consistent to result in complete discriminability, i.e., 100% correct diagnostic classification of subjects.

It is important to note that the tardive dyskinesia subjects used in the present study clearly had tardive dyskinesia. Would the results have been the same had these subjects been less affected by tardive dyskinesia? We are currently considering this question and anticipate a positive answer for two reasons. First, accelerometric measures are very sensitive, thereby allowing for the assessment of subclinical phenomena. Alpert (16) reported correlations of .7 to .9 between tremographic measures and extrapyramidal symptom ratings even when tremor was not clinically apparent. Second, complete discriminability was found with a small sample, indicating that the accelerometric measurements of the two groups were sufficiently different, i.e., the effect size was sufficiently large, that statistically significant results were easily obtained. Hence, we expect that clear discriminability will result when larger but less severely affected tardive dyskinesia and control groups are used.

A promising extension of the present results is accelerometric measurements involving the mouth. These are being taken by covering the balsa wood splint, to which the accelerometer is attached, with plastic wrap and having the subject hold it comfortably in a horizontal position with the teeth and lips. The subject is further instructed to place the tip of the tongue against the back of the splint. It is expected that this procedure will clearly detect the presence of the buccal-lingual-masticatory syndrome found in so many people with tardive dyskinesia.

The present study is the first in a planned series of studies. Consequently, some questions remained unanswered. Patients with tardive dyskinesia have yet to be compared with matched subjects having Parkinson's disease. We hypothesize that such a comparison will reveal that persons with Parkinson's disease will show

a lower peak frequency, a much greater peak amplitude, and a considerably narrower (more highly tuned) power spectrum than persons with tardive dyskinesia.

The present approach is quantitative rather than qualitative. We are not considering the presence of a specific pathognomic sign versus its absence. No one is perfectly coordinated; hence, some irregularities are found in normal subjects. These features are modified and exacerbated by disease until they become clinically recognizable as symptoms. Accelerometric methods appear capable of tracking these changes.

The fact that the subjects in our experimental group had an average AIMS rating of 11.93 limits the extent of generalization of the present results to patients with tardive dyskinesia of equal severity. The small sample size indicates that further study is necessary before firm conclusions can be drawn. However, the perfect discriminability obtained is encouraging. Measuring bilaterally and facially should enhance our ability to generalize by increasing the certainty about each patient's clinical status.

- 1. Guy W (ed): ECDEU Assessment Manual for Psychopharmacology: Publication ADM 76-338. Washington, DC, US Department of Health, Education, and Welfare, 1976, pp 534-537
- 2. Fann WE, Smith RC, Davis JM, et al: Tardive dyskinesia scales in current use, in Tardive Dyskinesia: Research and Treatment. Edited by Fann WE, Smith RC, Davis JM, et al. New York, SP Medical & Scientific Books, 1980
- Jeste DV, Wyatt RJ: Understanding and Treating Tardive Dyskinesia. New York, Guilford Press, 1982
- 4. Gardos G, Cole J: Problems in the assessment of tardive dyskinesia, in Tardive Dyskinesia: Research and Treatment. Edited by Fann WE, Smith RC, Davis JM, et al. New York, SP Medical & Scientific Books, 1980
- 5. Gardos G, Cole JO, LaBrie R: The assessment of tardive
- dyskinesia. Arch Gen Psychiatry 1977; 34:1206–1212 6. Kazamatsuri H, Chien C-P, Cole JO: Treatment of tardive dyskinesia, I: clinical efficacy of a dopamine-depleting agent,

- tetrabenazine. Arch Gen Psychiatry 1972; 27:95-95
- Kazamatsuri H, Chien C-P, Cole JO: Treatment of tardive dyskinesia, II: short-term efficacy of dopamine-blocking agents haloperidol and thiopropazate. Arch Gen Psychiatry 1972; 27:
- 8. Kazamatsuri H, Chien C-P, Cole JO: Treatment of tardive dyskinesia, III: clinical efficacy of a dopamine competing agent, methyldopa. Arch Gen Psychiatry 1972; 27:824-827
- 9. Davis KL, Berger PA, Hollister LE: Choline for tardive dyskinesia (letter). N Engl J Med 1975; 293:152
- 10. Fann WE: Tardive dyskinesia and other drug-induced movement disorders, in Tardive Dyskinesia: Research and Treatment. Edited by Fann WE, Smith RC, Davis JM, et al. New York, SP Medical & Scientific Books, 1980
- 11. Chien C-P, Jung K, Ross-Townsend A: Methodo ogical approach to the measurement of tardive dyskinesia: p:ezoelectric recording and concurrent validity test on five clinical rating scales. Ibid
- 12. Crayton JW, Smith RC, Klass D, et al: Electrophysiological (H-reflex) studies of patients with tardive dyskinesia. Am J Psychiatry 1977; 134:775-781
- 13. Denney D, Casey DE: An objective method for measuring dyskinetic movements in tardive dyskinesia. Electroencephalogr Clin Neurophysiol 1975; 38:645-646
- 14. Casey DE, Denney D: Deanol in the treatment of tardive dyskinesia. Am J Psychiatry 1975; 132:864-867
- Fann WE, Stafford JR, Malone RL, et al: Clinical research techniques in tardive dyskinesia. Am J Psychiatry 1977; 134:
- 16. Alpert M: Tremography as a measure of extrapyramidal function in the study of the dopamine hypothesis, in Catecholamines and Behavior. Edited by Friedhoff AJ. New York, Plenum, 1975
- 17. Alpert M, Diamond F, Friedhoff AJ: Tremographic studies in
- tardive dyskinesia. Psychopharmacol Bull 1976; 12:5-7

 18. Alpert M, Diamond F, Laski EM: Anticholinergic exacerbation of phenothiazine-induced extrapyramidal syndrome. Am J Psychiatry 1976; 133:1073-1075
- Crane GE: Pseudoparkinsonism and tardive dyskircsia. Arch Neurol 1972; 27:426-430
- 20. Gerlach J, Reisby N, Randrup A: Dopaminergic hypersensitivity and cholinergic hypofunction in the pathophysiology of tardive dyskinesia. Psychopharmacology 1974; 34:21-35
- Schooler NR, Kane JM: Research diagnoses for tardive dyskinesia. Arch Gen Psychiatry 1982; 39:486-487
- Haldol (Haloperidol) Dosage Equivalency Calculator. Spring House, Pa, McNeilab, 1981

Bipolar Mood Disorder and Endometriosis: Preliminary Findings

Dorothy Otnow Lewis, M.D., Florence Comite, M.D., Catherine Mallouh, B.A., Laura Zadunaisky, M.S., Karen Hutchinson-Williams, M.D., Bruce D. Cherksey, Ph.D., and Catherine Yeager, M.A.

A consecutive sample of 16 women with laparoscopy-diagnosed endometriosis were evaluated for mood disorders. Twelve women met DSM-III criteria for a mood disorder: seven for bipolar disorder, mixed, three for bipolar disorder, manic, and two for major depression. Two women had equivocal diagnoses and two showed no evidence of mood disorder. Nine subjects had first-degree relatives with histories of severe mood disorders.

(Am J Psychiatry 1987; 144:1588–1591)

This paper reports evidence of an unusually high prevalence of bipolar illness in a sample of women with endometriosis. Because of the clinical observation that several women with bipolar illness seen in a private psychiatric practice had been diagnosed by their gynecologists as suffering from endometriosis, we wondered if there were an association between these two poorly understood clinical syndromes.

LITERATURE REVIEW

The relationship among physical, hormonal, and emotional factors is poorly understood. The disorder most commonly associated with mood alterations in women has been the premenstrual syndrome (1). Endometriosis, on the other hand, has been dubbed a career woman's disease because of its association with a delay in childbearing and with a diminished number of pregnancies (2–4). Patients with endometriosis have been described as "overanxious, intelligent, and perfectionist" (5). However, the relationship of mood

disorder to endometriosis, to the best of our knowledge, has been ignored.

Estimates of the prevalence of endometriosis in the general population have ranged from zero to over 50% (3). The prevalence of mood disorders in the general population is considerably lower. The prevalence rates for major depression in women range from 4.1% to 6.9%, and the 6-month prevalence for a manic episode in women ranges from 0.4% to 0.9% (6). The lifetime risk for suffering a major depression is from 20% to 26% for women. The lifetime risk of bipolar mood disorder for women is from 0.6% to 1.3% (6). Thus, an occurrence of bipolar disorder that is appreciably above 1.3% in patients with endometriosis is noteworthy.

Hormonal fluctuations have been studied in both endometriosis and mood disorders, and in both instances results have been equivocal. Although abnormalities of estradiol, progesterone, and prolactin secretions have been reported in patients with endometriosis (7–11), the role of these hormones in the etiology of the disease remains unclear.

If the relationship of hormones to endometriosis is puzzling, the relationship of hormones to unipolar and bipolar illness is truly baffling. Increased ACTH and adrenal cortex activity have been found in depressed patients (12, 13) and in manic patients (14–17). Other hormonal abnormalities reported include blunted thyroid-stimulating hormone (TSH) response to thyrotropin-releasing hormone (TRH) in both depression and mania (18–21), reduced nocturnal growth hormone release in depression but not mania (22–24), blunted nocturnal elevations of prolactin and melatonin in depression (23), and elevated nocturnal melatonin levels and prolactin levels in manic patients (25, 26).

The relationship of gonadotropins and sex hormones to mood disorders is of special interest, given the fact that mania is rare before puberty (27, 28) and that the period of highest risk for its onset is the first 2 weeks after childbirth, a time of especially high prolactin levels (29). In brief, studies focusing on gonadotropins and gonadal steroid hormone levels and mood disorders have been inconsistent.

Thus, endometriosis and the mood disorders may have certain hormonal commonalities, the understand-

Copyright © 1987 American Psychiatric Association.

Received Oct. 14, 1986; revised May 18, 1987; accepted July 27, 1987. From the Departments of Psychiatry, Physiology, and Biophysics and the Millhauser Laboratories, New York University School of Medicine; and the Departments of Medicine and Obstetrics and Gynecology, Yale University School of Medicine, New Haven, Conn. Address reprint requests to Dr. Lewis, Department of Psychiatry, New York University Medical Center, New Bellevue Hospital, 21S25, 550 First Ave., New York, NY 10016.

ing of which could shed light on the mechanisms of both disorders. Given these potential associations, it is surprising that the two disorders have not been associated with each other. We therefore began to study systematically the possible relationship between endometriosis and mood disorder.

METHOD

Our subjects consisted of a consecutive sample of 16 women who were being treated for endometriosis at a women's clinic of a university hospital. The women were aged 20–37 years (average age, 29 years). They were not selected in any way for psychopathology, and before the study, had not been identified as requiring psychiatric services. They were referred to the endometriosis clinic by community internists and gynecologists, gynecologists within the university, and other patients or were self-referred. Thus, there was a variable pattern of referrals. In all cases endometriosis had been diagnosed by laparoscopy.

The determination of mood disorder was done by means of an interview schedule which, for purposes of this study, was drawn from the Hamilton Rating Scale for Depression, the Schedule for Affective Disorders and Schizophrenia—Lifetime Version (30), the Beck Depression Inventory (31), and the criteria listed in DSM-III. The interviews were administered by a psychiatrist (D.O.L.) and two medical students (C.M. and L.Z.). Each interview lasted from 1½ to 3 hours.

The interview covered the assessment of 1) depressive symptoms (crying, hopelessness, suicidal ideation, suicide attempts, change in appetite and/or weight, loss of interest in usual activities, social withdrawal, insomnia, hypersomnia, fatigue, lack of concentration, irritability, number and duration of episodes, age of patient at each episode, alcohol and drug abuse, and treatment for depression); 2) manic or hypomanic symptoms (increased energy, increased productivity, decreased need for sleep, speaking rapidly—too much or too loudly, racing thoughts, episodic gorging, weight loss associated with hyperactivity, spending sprees, accumulation of debts, hypersexuality, poor judgment, extreme rages, loss of control, silly, bizarre, or inappropriate behaviors, and previous psychiatric treatment for these symptoms); and 3) family history for first- and second-degree relatives (history of psychiatric treatment or severe emotional problems, hospitalization, psychotropic medication, psychotherapy, diagnoses of depression or clear symptoms of depression [e.g., periodic withdrawal, crying, and staying in bed], suicidal behaviors, alcohol or drug problems, spending sprees, uncontrolled gambling, extreme rages, violence, diagnoses of mania or clear symptoms of mania [e.g., bizarre behaviors and extremes of mood]). For purposes of diagnosis, DSM-III criteria for major depressive and bipolar disorders were strictly observed.

FINDINGS

Of the 16 subjects, 12 met DSM-III criteria for a mood disorder (seven for bipolar mood disorder, mixed, three for bipolar disorder, manic, and two for major depression); two had symptoms of mood disorder that were insufficient for a diagnosis (equivocal); and two had no evidence of mood disorder. At the time of their actual interviews, eight women were experiencing depressive symptoms (e.g., insomnia, tearfulness, or intense sadness); four were noted to be excessively gregarious, happy, and outgoing; and four were euthymic. All of the subjects with well-documented bipolar or major depressive disorders gave histories of having had their initial episodes before receiving a diagnosis of endometriosis.

Of special note was the early, fairly well-documented onset of depressive episodes. In all cases of bipolar disorder, the first episode was of depression. Three subjects suffered their first depressive episodes between the ages of 8 and 10 years, four between the ages of 13 and 14 years, and three during high school at about 16 years of age. Whether or not the onset of symptoms was precipitated by pubertal hormonal changes remains to be explored. For seven subjects, depressive symptoms were exacerbated premenstrually, raising the possibility of hormonally related events and suggesting a possible relationship among premenstrual syndrome, endometriosis, and the predisposition to major depressive and/or bipolar mood disorders.

Charts that systematically document diagnoses (e.g., table 1) fail to convey the quality of the psychiatric disorders of these subjects. Therefore, we present several brief clinical descriptions of the first three subjects listed in table 1, who had both manic (or hypomanic) and depressive symptoms.

CASE REPORTS

Subject 1 suffered her first depressive episode when she was 13 years old, which included suicidal feelings, crying spells, trouble falling asleep, withdrawal from her friends, lying in bed and missing school, and the appearance to her mother of being "on drugs." She was treated by a family doctor with amitriptyline and "tranquilizers." During a second severe depression (postpartum), she was briefly hospitalized. At approximately 21 years of age, she had a manic episode that lasted over 8 months; during that time she stayed out all night, had "frantic sex" with many different partners, wrote copiously, and made numerous phone calls to different parts of the country. To quote her, "I didn't know what I was doing."

Subject 2 experienced her first depressive episode during adolescence when she stayed in bed for days, withdrew from all her friends, and "lay there with the radio on and slept and slept." At age 22, she experienced a period of over 1 year when she partied "every night"; when she worked nights, she partied days. She "kept going and going." She also began to spend large amounts of money. She said, "I saved \$2,000. I

TABLE 1. Diagnostic and Family Characteristics of 16 Women With Endometriosis and Mood Disorder

Subject ^a and	Age	Social	Age at Onset	Family	Psychiatric History
Diagnosis	(years)	Class	(years)	First-Degree Relatives	Second-Degree Relatives ^b
Bipolar, mixed					
1 ′	30	IV	13	Mother: depressions, violent rages Father: depressions, panic attacks Brother: hospitalization, violent mood swings	Three uncles (p?): alcoholic
2	32	IV	16	Father: alcoholic	Grandfather (m): alcoholic
3	33	III	21	Adopted	` <i>'</i>
4	29	III	13	Mother: "bad temper" Father: possible alcoholic Brother: drug abuse	Grandfather (m): alcoholic Grandfather (p): alcoholic
5	37	I	8	Mother: depressions	Aunt (m): depression
6	25	III	8	Father: "nervous breakdown" Brother: drug and alcohol abuse	Grandfather (m): alcoholic Grandfather (p): alcoholic
7	29	IV	10	Mother: "bad temper" Father: compulsive gambler	Aunt (m): outpatient treatment, psychotropic medication
Bipolar, manic				, 0	
8	20	Ш	********	Mother: "workaholic"	Grandmother (m): hospitalization, ECT
9	30	I	14	Mother: hypomania, multiple marriages Father: depression	Grandmother (m): possible hypomania, multiple marriages
10	37	II	#HANDE AND	Father: "bad temper" Brother: possibly alcoholic Sister: anorexia nervosa, bulimia	
Major depression				,	
11	22	H	16	_	Three aunts (p): alcoholic
12	31	II	23	Mother: alcoholic Brother: suicide attempt Sister: outpatient treatment, child abuser	Grandfather (p): "insane" Two uncles (p?): alcoholic
Equivocal					
13	21	III	13	Mother: "workaholic" Sister: depression, suicide attempt	Grandfather (p): medication for "nerves"
14	26	IV	16	Mother: hospitalized for depression, died from overdose	Aunt (m): hospitalization, psychotropic medication Three uncles (m): alcoholic
None					· · · · · · · · · · · · · · · · · · ·
15	33	III		Mother: two hospitalizations, ECT for depression	Aunt (m): reclusive, anorexia nervosa
16	36	I	Acceptance		Aunt (p): possible hypomania

^aSubject 2 was black, and subject 13 was Hispanic; the other 14 subjects were white.

blew all that in a couple of months." Her friends told her that she had changed. This manic episode was followed at age 25 by a suicidal depressive episode.

Subject 3 suffered two depressive episodes, the first in her early 20s, characterized by crying, sadness, guilt feelings, middle of the night awakening, and hyperphagia. During her 20s and early 30s, she suffered several manic episodes characterized by excessive loud talking, elated moods, extreme jocularity, excessive exercise, and hypersexuality. She would then become sexually involved with several different men during the same period of time, some of whom beat her. In retrospect, she felt that she had "not been herself." While in treatment at the endometriosis clinic, she suffered a manic episode during which she blew bubblegum in the face of a senior physician and addressed the head of the clinic by pet nicknames of her own choosing.

Unfortunately, we were able to obtain family histories from the subjects only and not from records or

family members. As illustrated in table 1, mood disorders were prevalent in their first- and second-degree relatives. In fact, three subjects had first-degree relatives who had been psychiatrically hospitalized for mood disorders, one had a parent who had been treated at home for a "nervous breakdown," two had siblings who had attempted suicide, and one had a sibling with anorexia nervosa and bulimia.

DISCUSSION

This preliminary study suggests that endometriosis and mood disorders, especially bipolar disorder, may be closely related. Abnormal levels of some of the same hormones have been implicated in both disorders (12–26). In addition, the same monoamines, norepinephrine and serotonin, that are associated with the hypothalamic-hypophyseal system and hence with the secretion of female hormones are also thought to influ-

bp=paternal; m=maternal.

ence moods directly in the brain itself (32). Furthermore, since progesterone and estrogen affect α- and B-adrenergic receptor densities in the uterus and endometrium (33, 34), they may alter these receptor densities in the brain as well. Thus, the discovery of a possible link between a disorder of the female reproductive system and bipolar mood disorders has heuristic value. The recognition of the coexistence of these disorders may enhance the understanding of the physiological mechanisms and genetic patterns underlying these puzzling syndromes.

- 1. Dalton K: The Premenstrual Syndrome and Progesterone Ther-
- apy, 2nd ed. Chicago, Year Book Medical Publishers, 1984 Wallis C: The Career Woman's Disease? Time, April 28, 1986,
- 3. Houston DE: Evidence for the risk of pelvic endometriosis by age, race and socioeconomic status. Epidemiol Rev 1984; 6: 167–191
- 4. Molgaard CA, Golbeck AL, Graham L: Current concepts in endometriosis. West J Med 1985; 143:42-46
- Kistner RW: Endometriosis and infertility, in Progress in Infertility. Edited by Behrman SJ, Kistner RW. Boston, Little Brown,
- Weissman MM, Boyd JH: Affective disorders: epidemiology, in Comprehensive Textbook of Psychiatry, 4th ed, vol 1. Edited by Kaplan HI, Sadock BJ. Baltimore, Williams & Wilkins, 1985
- 7. Brosens IA, Konnick PR, Corveleyn PA: A study of plasma progesterone, estradiol-17B, prolactin and LH levels of the luteal phase appearance of the ovaries in patients with endometriosis and infertility. Br J Obstet Gynaecol 1978; 85:246-
- 8. Hargrove JT, Abraham GE: Abnormal luteal function in endometriosis (abstract). Fertil Steril 1980; 34:302
- Jones GS: The luteal phase defect. Fertil Steril 1976; 27:351-
- 10. Dizerega GS, Barber D, Hogden G: Endometriosis: role of ovarian steroids in initiation, maintenance and suppression. Fertil Steril 1980; 33:649-653
- 11. Hirschowitz JS, Sole NG, Worstman J: The galactorrhoeaendometriosis syndrome. Lancet 1978; 1:896-898
- Carroll BJ: The dexamethasone suppression test for melancholia. Br J Psychiatry 1982; 140:292-304
- 13. Rubin RT, Poland RE Pituitary-adrenocortical and pituitarygonadal function in affective disorder, in Neuroendocrinology of Psychiatric Disorder. Edited by Brown GM, Koslow SH, Reichlin S. New York, Raven Press, 1983
- 14. Stokes PE, Stoll PM, Koslow SH, et al: Pretreatment DST and hypothalamic-pituitary-adrenocortical function in depressed patients and comparison groups. Arch Gen Psychiatry 1984; 41: 257–267

- 15. Graham PM, Booth J, Boranga G, et al: The dexamethasone suppression test in mania. J Affective Disord 1982; 4:201-211
- Amsterdam JD, Winokur A, Caroff S, et al: Gonadotropin release after administration of GnRH in depressed patients and healthy volunteers. J Affective Disord 1981; 3:367–380
- 17. Evans DL, Nemeroff CB: The dexamethasone suppression test in mixed bipolar disorder. Am J Psychiatry 1983; 140:615-617
- 18. Loosen PT, Prange AJ: Serum thyrotropin response to thyrotropin-releasing hormone in psychiatric patients: a review. Am Psychiatry 1982; 139:405-416
- 19. Kirkegaard C, Bjorum N, Cohn D, et al: Thyrotropin-releasing hormone (TRH) stimulation test in manic-depressive illness. Arch Gen Psychiatry 1978; 35:1017-1021
- 20. Extein I, Pottash ALC, Gold MS, et al: The thyroid stimulating hormone response to thyrotropin-releasing hormone in mania and bipolar depression. Psychiatr Res 1980; 2:199-204
- 21. Ettigi PG, Brown GM, Seggie JA: TSH and LH responses in subtypes of depression. Psychosom Med 1979; 41:203-208
- 22. Brown GM, Seggie JA, Chambers JW, et al: Psychoendocrinology and growth hormone: a review. Psychoneuroendocrinology 1978; 3:131–153
- 23. Rubin RT, Poland RE: The chronoendocrinology of endogenous depression, in Neuroendocrine Perspectives, vol 1. Edited by MacLeod RM, Muller EE. Amsterdam, Elsevier/North Holland, 1982
- 24. Casper RC, Davis JM, Pandey GN, et al: Neuroendocrine and amine studies in affective illness. Psychoneuroendocrinology 1976; 2:105-113
- 25. Meltzer HY, Kalakowska T, Fang VS, et al: Growth hormone and prolactin response to apomorphine in schizophrenia and the major affective disorders. Arch Gen Psychiatry 1984; 41:
- 26. Lewy AJ, Wehr TA, Gold PW, et al: Plasma meiatonin in manic-depressive illness, in Catecholamines: Basic and Clinical Frontiers, vol 2. Edited by Usdin E, Kopin IJ, Barchas J. New
- York, Pergamon Press, 1979

 27. Puig-Antich J (ed): Children and Depression. Psychiatr Clin North Am 1980; 3(3)
- 28. Hassanyeh F, Davidson K: Bipolar affective psychosis with onset before age 16 years—report of 10 cases. Br J Psychiatry 1980; 137:530–539
- 29. Dean C, Kendell RE: The symptomatology of puerperal illness. Br J Psychiatry 1981; 139:128-133
- 30. Spitzer RL, Endicott J: Schedule for Affective Disorders and Schizophrenia—Lifetime Version, 3rd ed. New York, New York State Psychiatric Institute, Biometrics Research, 1979
- 31. Beck AT, Beck AW: Screening depressed patients in family practice. Postgrad Med 1972; 52:81-85
- 32. Schildkraut JJ, Green AI, Mooney JJ: Affective disorders: biochemical aspects, in Comprehensive Textbook of Psychiatry, 4th ed, vol 1. Edited by Kaplan HI, Sadock BJ. Baltimore, Williams & Wilkins, 1985
- 33. Davies AO, Lefkowitz RJ: Regulation of adrenergic receptors
- by steroid hormones. Annu Rev Physiology 1984; 46:119-130 34. Motulsky HJ, Insel PA: Adrenergic receptors in man. N Engl J Med 1982; 307:18–29

Premenstrual Exacerbation of Binge Eating in Bulimia

Madeline M. Gladis, M.A., and B. Timothy Walsh, M.D.

Several studies have suggested an association between the premenstrual phase of the menstrual cycle and changes in appetite and eating behavior. This study examined the relation between phase of menstrual cycle and frequency of binge eating in 15 normal-weight women with bulimia whose eating behavior had been unaffected by placebo treatment during a medication study. There was a modest but statistically significant premenstrual exacerbation of binge eating.

(Am J Psychiatry 1987; 144:1592–1595)

he premenstrual phase of the menstrual cycle has been associated with a number of somatic and psychological symptoms. Changes in appetite and eating behavior have been reported by women on questionnaires designed to measure menstrual distress; these changes are often considered to be part of a "premenstrual syndrome" (1–3). Theoretically, women who have bulimia, an eating disorder characterized by binge eating and purging, would be especially vulnerable to these symptoms of increased appetite and craving for sweets, thus leading to a premenstrual exacerbation of their illness. However, a recent study by Leon et al. (4) failed to find a relationship between phase of menstrual cycle and eating behavior in 45 women who met diagnostic criteria for bulimia. We recently concluded a double-blind study of the use of an antidepressant to treat patients with bulimia and, as part of that study, routinely documented binge frequency and time of menses. To determine whether there was an association between fluctuation in bulimic symptoms and phase of menstrual cycle, we examined data from patients who had been assigned to placebo and had failed to respond.

METHOD

Patients in this study had participated in a doubleblind, placebo-controlled trial of phenelzine, which was described previously (5). That trial included women 18-45 years old who were of normal body weight, met the DSM-III criteria for bulimia, had had bulimia for at least 1 year, and were binge eating at least three times weekly. For the current analysis, we selected the patients who had been assigned to placebo and had, at most, minimally improved (rated by the physician as minimally improved, unchanged, or worse on the Clinical Global Impression scale). We also required the subjects selected for this analysis to have menstruated regularly for the preceding 6 months, to not be taking birth control pills, and to have kept thorough records of their menstrual cycles and the frequency of their binges. Fifteen of the 26 patients who had not responded to placebo met these inclusion criteria; data from these subjects are presented here.

The subjects had completed eating diaries before and during their participation in the 10-week medication study. In these they had recorded the daily number of binges and noted the days on which their menstrual periods occurred. Data were collected over two to four menstrual cycles (mean=2.5 cycles). Subjects had also filled out the Beck Depression Inventory at each of their weekly visits to our clinic.

In an extension of the procedure used by Endicott et al. (6), we divided the menstrual cycle into 5-day segments: three premenstrual segments, three postmenstrual segments, and one menstrual segment (the first 5 days of menses) (see figure 1). Depending on the length of the cycle, there was a variable overlap of segment 1 and segment 7 for women who had cycles lasting fewer than 35 days.

For each patient we calculated the average number of binges in each 5-day segment for all of her menstrual cycles. We then divided by 5 to obtain the mean number of binges per day for each patient in each 5-day segment. These data were submitted to two methods of statistical analysis. We were interested in combining information from individuals with markedly different daily binge frequencies. Therefore, we computed a z score for each subject for each 5-day segment: $z=x_i - \text{mean/SD}$, where x_i is binges per day in the *i*th 5-day segment, and mean and SD are, respectively, the overall mean and standard deviation

Received Jan. 5, 1987; revised May 4, 1987; accepted June 8, 1987. From the Department of Psychiatry, College of Physicians and Surgeons, Columbia University, New York; and the New York State Psychiatric Institute. Address reprint requests to Ms. Gladis, New York State Psychiatric Institute, 722 West 168th St., New York, NY 10032

Supported in part by grant MH-38355 from NIMH.

The authors thank Wynn Jackson, M.D., and Elizabeth Druss for their assistance.

Copyright © 1987 American Psychiatric Association.

of binges per day for that individual. For each subject, the mean and standard deviation of the z score across the seven menstrual segments were 0 and 1, respectively. Thus, the z score for any one menstrual segment was an indication of the fluctuation of binge frequency above or below the individual's overall average binge frequency. The z scores for each 5-day segment were averaged across patients to obtain an average z score for each 5-day segment. Analysis of variance (ANOVA) was used to determine whether binge frequency varied significantly among the seven 5-day segments that corresponded to phases of the menstrual cycle.

The second method we used to examine the differences between menstrual segments while controlling for variability among subjects was a repeated measures ANOVA. With this technique we tested for the effect of time (or segment number) on mean number of binges per day in each segment.

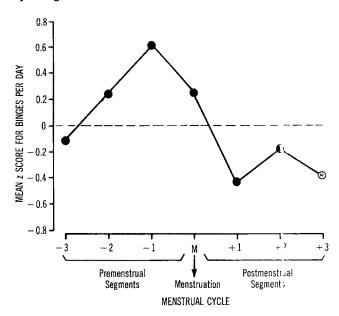
RESULTS

The 15 patients in our sample had a mean±SD age of 28.1±6.6 years and weighed a mean±SD of 104.7%±11.7% of the ideal body weight for their height, based on the midpoint for a medium frame, in the 1959 Metropolitan Life Insurance Company standards. The mean±SD duration of illness was 8.7±6.4 years, and .98±.58 episodes of binge eating occurred per day. Thirteen of the 15 subjects induced vomiting after binge eating, one abused laxatives, and one fasted to avoid weight gain. The mean±SD Eating Attitudes Test (7) score was 38.2±13.5; females without eating disorders usually score below 30 on this 40-item self-report measure of symptoms of anorexia nervosa and bulimia.

An ANOVA of the z scores revealed a significant difference between segments (F=2.82, df=6, 98, p=.01). Duncan's multiple comparison test was used to determine the pattern of differences between menstrual segments. The premenstrual segment that comprised the 5 days immediately before the onset of menses had a significantly higher binge frequency than all other segments except the one immediately preceding it (5-10 days before menses) and the menstrual segment (p=.05). The mean \pm SD z score for the immediate premenstrual segment was 0.61±0.73; the mean±SD z score for the 5-10 days after menses had begun was -0.43 ± 0.93 . It has been suggested that many women have the fewest symptoms during this time after the menstrual period (6). Figure 1 depicts mean z scores over the course of the cycle.

Results obtained from a repeated measures ANOVA were very similar. An averaged univariate F test indicated that binge frequency changed significantly during the menstrual cycle (F=2.25, df=6, 84, p=.05). A multiple comparison procedure (least significant difference method) was carried out to specify the nature of the differences between segments. Binge frequency in the 5 days preceding menstrual flow was again found

FIGURE 1. Mean z Scores for Binges per Day in 5-Day idenstrual Cycle Segments of 15 Women With Bulimia



to be significantly higher than that in all postmenstrual phases (p<.05) but not significantly different from that in the 5–10 days before menses or in the first 5 days of menstruation.

No significant difference was found between the average Beck inventory score during the menstrual cycle phase associated with the highest binge frequency and the average score during the phase with the lowest binge frequency.

DISCUSSION

Our finding of a modest premenstrual increase in binge frequency supports the hypothesis that the binge eating behavior of some women with bulimia changes during the menstrual cycle. Binge eating tended to be most frequent in the 5 days preceding the menstrual period and least frequent in the 5-10 days after menses had begun. These results are based on a relatively small sample of bulimic women who participated in a medication trial, and this pattern may not exist in samples drawn from other populations. However, the findings are consistent with other prospective studies of both humans and primates that have documented changes in eating behavior during the menstrual cycle. Czaja (8) monitored the food intake of 202 female rhesus monkeys for a 7-month interval and found that the level of food rejection fluctuated with hormonal changes; it reached a minimum during the last week of the menstrual cycle. Dalvit (9) interviewed eight normal women about their dietary intake every day for 60 days. The mean caloric intake for this group was approximately 500 calories higher during the 10 days after ovulation than during the 10 days before.

Our results are not consistent with those reported by

Leon et al. (4) in the single previous study that has examined the eating behavior of bulimic subjects in relation to menstruation. Those investigators used prospective ratings of mood and physical symptoms to divide their sample of 45 women into two groups, one with premenstrual syndrome and one without. They found no difference between premenstrual and intermenstrual eating in either group and high correlations in binge frequency among all phases of the menstrual cycle, leading them to conclude that problem eating behaviors were stable across the cycle.

There are a number of differences between that study and our own which may account for the different results. First, it is likely that clinically different samples were used. Our subjects were women who were so distressed by their eating behavior that they sought treatment with medication. Most of them had severe and chronic illnesses that disrupted other areas of functioning. Binge frequency was high and was followed by vomiting in almost all our subjects. Because binge frequency was not reported by Leon et al. in their study, we cannot compare the two samples on this measure of severity. Vomiting was reported by only 26.6% of their subjects but by 86.6% of ours. In addition, their subjects were somewhat older (30.3 versus 28.1 years) and heavier (144.5 versus 132.4 lb.) than our subjects.

Second, 44.4% of Leon et al.'s subjects were taking either antidepressants or tranquilizers during the course of the study. Such medications may have an effect on eating behavior, hormonal changes, or the relation between the two. Conceivably, the use of placebo during our rating period could have influenced either eating behavior or mood, but we selected patients who had not been affected by placebo. Therefore, comparisons between a group of subjects some of whom were receiving psychopharmacological treatment and a group who were unresponsive to placebo may not be meaningful.

Third, Leon et al. partly based their conclusion that eating behavior is stable over time on the high correlations in binge frequency among the various phases of the menstrual cycle in their subjects. However, one would expect high within-person correlations of frequency of behaviors over time; someone who binges and vomits at a higher rate one week is likely to continue binge eating at a higher rate than other members of the group. Our data also show high correlations (all >.59) between the various phases of the menstrual cycle. The more important indicator of menstrually related effects is the change relative to an individual's own average from one phase to the next, not the degree to which an individual's level of binge eating remains high or low relative to that of other individuals.

There is empirical evidence linking the premenstrual and menstrual phases of the cycle to the course of other psychiatric disorders; these phases have been associated with an increased number of suicide attempts and psychiatric admissions (10, 11) and a recurrence or exacerbation of symptoms in some women with bipolar illness and schizophrenia (12, 13). In addition, women with a life history of affective illness have been reported to have more premenstrual symptoms (14). As Rubinow and Roy-Byrne (15) pointed out, there are a number of conceptually different ways to describe the relationship between the menstrual cycle and psychiatric symptoms, and the underlying mechanisms are not yet understood.

There seem to be at least two possible and distinctive explanations of our findings. It may be that change in reproductive hormone levels produces a biological drive to eat, which would then lead to an increase in binge frequency in bulimic individuals. Similarities between the phenomenology of bulimia and complaints of increased appetite and food cravings before menses in women without eating disorders support this hypothesis. Alternatively, it may be that hormonal changes lead to mood changes (specifically, increased anxiety and/or depression), which in turn increase the desire to binge. This implies premenstrual exacerbation of both eating problems and negative mood states. A high rate of depressive disorder has been found in women with bulimia (16), and it has been consistently reported that bulimic subjects binge in response to dysphoric feelings (17, 18). Although we found no premenstrual increase in weekly Beck inventory scores, daily ratings and a larger sample of subjects may be necessary to elucidate the relationship between mood, eating behavior, and the menstrual cycle.

- Moos RH: The development of a menstrual distress questionnaire. Psychosom Med 1968; 30:853–867
- Halbreich U, Endicott J, Schact S, et al: The diversity of premenstrual changes as reflected in the Premenstrual Assessment Form. Acta Psychiatr Scand 1982; 65:46-65
- Dalton K: Premenstrual tension: an overview, in Behavior and the Menstrual Cycle. Edited by Friedman RC. New York, Marcel Dekker, 1982
- 4. Leon GR, Phelan PW, Kelly JT, et al: The symptoms of bulimia and the menstrual cycle. Psychosom Med 1986; 48:415–422
- Walsh BT, Stewart JW, Roose SP, et al: A double-blind trial of phenelzine in bulimia. J Psychiatr Res 1985; 19:485–489
- Endicott J, Nee J, Cohen J, et al: Premenstrual changes: patterns and correlates of daily ratings. J Affective Disord 1986; 10:127– 135
- Garner D, Garfinkel PE: The Eating Attitudes Test: an index of symptoms of anorexia nervosa. Psychol Med 1979; 9:273-279
- Czaja JA: Food rejection by female rhesus monkeys during the menstrual cycle and early pregnancy. Physiol Behav 1975; 14: 579–587
- Dalvit SP: The effect of the menstrual cycle on patterns of food intake. Am J Clin Nutr 1981; 34:1811–1815
- Mandell AJ, Mandell MP: Suicide and the menstrual cycle. JAMA 1967; 200:792-793
- 11. Janowsky DŚ, Gorney R, Castelnuovo-Tedesco P, et al: Premenstrual-menstrual increases in psychiatric hospital admission rates. Am J Obstet Gynecol 1969; 103:189–191
- 12. Endo M, Daiguji M, Asano Y, et al: Periodic psychosis recurring in association with menstrual cycle. J Clin Psychiatry 1978;39:
- Glick ID, Steward D: A new drug treatment for the premenstrual exacerbation of schizophrenia. Compr Psychiatry 1980;

21:281-287

- 14. Endicott J, Halbreich U, Schact S, et al: Premenstrual changes and affective disorders. Psychosom Med 1981; 43:519–529
- Rubinow DR, Roy-Byrne P: Premenstrual syndromes: overview from a methodologic perspective. Am J Psychiatry 1984; 141: 163-172
- Walsh BT, Roose SP, Glassman AH, et al: Bulimia and depression. Psychosom Med 1985; 47:123–131
- 17. Johnson C, Larson R: Bulimia: an analysis of moods and behavior. Psychosom Med 1982; 44:341–351
- 18. Mitchell JE, Hatsukami D, Eckert ED, et al: Characteristics of 275 patients with bulimia. Am J Psychiatry 1985; 142:482–485

An International Perspective on Assessment of Negative and Positive Symptoms in Schizophrenia

Massimo Moscarelli, M.D., Cesare Maffei, M.D., Bruno Mario Cesana, M.D., Paolo Boato, M.D., Tommaso Farma, M.D., Adele Grilli, M.D., Vittorio Lingiardi, M.D., and Carlo Lorenzo Cazzullo, M.D.

The authors used the Scale for Assessment of Negative Symptoms and the Scale for Assessment of Positive Symptoms in interviews of 96 psychiatric inpatients in Italy. They evaluated the interrater reliability and the internal consistency of these scales for the assessment of negative and positive symptoms in schizophrenia. Their findings indicate that the results of these scales are similar in Italy and the United States, countries with different languages and cultures.

(Am J Psychiatry 1987; 144:1595-1598)

In the revision of the criteria for the diagnosis of schizophrenia that has been in process for several years, interest has been focused on a division into negative and positive forms (1–5). Some clinicians and investigators believe that negative symptoms are difficult to rate reliably. Negative symptoms appear only minimally in the DSM-III criteria for schizophrenia. To compensate for this, several scales to rate negative and positive symptoms were developed in the United States, including the Scale for Assessment of Negative Symptoms (3) and the Scale for Assessment of Positive Symptoms (4). The interrater reliability of the Scale for Assessment of Negative Symptoms in the United States has been reported to be excellent. The five symptom complexes of this scale are also reported to have good

internal consistency, indicating that the conceptual organization of the scale is cohesive.

Although these findings are interesting, it is important to determine whether they would hold in different cultural environments—Italy, for example. Therefore, we translated the Scale for Assessment of Negative Symptoms and the Scale for Assessment of Positive Symptoms into Italian and attempted to replicate the reported findings concerning reliability, internal consistency, and intercorrelations between negative and positive symptoms.

METHOD

The interrater reliability of the two scates was evaluated in a sample of 96 patients. Sixty of the patients were men and 36 were women. Their mean±SD age was 36±15 years. All patients were without organic disease, addiction to drugs, or mental insufficiency. They had been admitted consecutively to the Institute of Clinical Psychiatry of Milan. Fifty-nine (61%) of the patients were diagnosed as having schizophrenia, 20 (21%) as having personality disorders, eight (8%) as having unclassifiable psychotic disturbances, two (2%) as having paranoia, five (5%) as having affective disorders, and two (2%) as having anxiety disorder. All provided informed consent.

The interviews for the two scales were conducted by three staff psychiatrists (M.M., C.M., and A.G.) and by three final-year students in medicine who had had at least 1 year of experience in clinical psychiatry (P.B., T.F., and V.L.). The interviewers did not know the patients' diagnoses, which were made by other investigators. Each patient was interviewed by two exam-

Copyright © 1987 American Psychiatric Association.

Received July 2, 1986; revised April 3, 1987; accepted May 7, 1987. From the Department of Psychiatry, University of Milan, Italy. Address reprint requests to Dr. Moscarelli, Via Ariberto n. 3, 20123, Milano, Italy.

iners. The interviews were assigned according to a balanced design in which each evaluator was interviewer or observer an equal number of times. Two psychiatrists interviewed 24 patients; one psychiatrist and one student interviewed 72 patients. Each evaluation was made without any discussion before or after the interview. Interviews took place during the first week of hospitalization. Scores were assigned only on the basis of the interviews, without any additional information. All patients were being treated pharmacologically, and none had received ECT in the past.

To keep the size of the sample large, we decided to use the overall sample of 96 patients to evaluate the agreement in determination of positive and negative symptoms rather than dividing the sample by diagnosis. To evaluate the influence of clinical experience on interrater reliability and see whether there would be an increase in the agreement between psychiatrists and students during the 6 months of the study, we compared the first and the last 24 evaluations made by psychiatrist-student pairs.

Internal consistency, coefficient of correlation, and principal component analyses were calculated for psychiatrists' evaluations of the 59 schizophrenic patients. Thirty-eight of these patients were men and 21 were women; their mean ±SD age was 32.18 ± 14.43 years. Thirteen had subchronic and 46 had chronic schizophrenia. Their mean±SD age at onset of illness was 25.10±10.13 years. They had been hospitalized a mean of 5.08±6.44 times; the mean duration of their total hospitalizations was 112.92±123.11 days; and the mean duration of each hospitalization was 25.20± 9.97 days. They had a mean education level of 10.35 ± 3.58 years. Seven (12%) were students, four (7%) were employed, nine (15%) were intermittently employed, seven were housewives, four were retired, and 28 (47%) were unemployed. Forty-seven (80%) were unmarried, and 12 (20%) were married; 20 (34%) lived alone, and 39 (66%) lived with family or friends.

Using the two scales, we diagnosed five (8%) of the 59 schizophrenic patients as having negative, 44 (75%) as having mixed, and 10 (17%) as having positive schizophrenia. There were no significant sociodemographic differences among the three groups.

Interrater reliability was calculated by using Cohen's kappa, and internal consistency was evaluated by using Cronbach's alpha. Correlations between the variables were evaluated by using Pearson's r coefficient. The three groups were compared by one-way analysis of variance (ANOVA) or the chi-square test, depending on the variable. All the analyses, except for Cohen's kappa, were made by using the Statistical Package for the Social Sciences (SPSS) (6).

RESULTS

Table 1 shows the interrater reliability of the negative symptom scale and table 2 shows the interrater

TABLE 1. Interrater Reliability of Negative Symptoms in Interviews of 24 Psychiatric Patients Conducted by Two Psychiatrists

	_		
Symptom	Simple Cohen's kappa	Maximal Cohen's kappa	Weighted Cohen's kappa
	карра	карра	карра
Affective flattening			
Unchanging facial expression Decreased spontaneous	0.727	0.945	0.786
movements	0.771	0.828	0.782
Paucity of expressive gestures	0.645	0.881	0.757
Poor eye contact	0.735	0.933	0.873
Affective nonresponsivity	0.605	0.684	0.714
Inappropriate affect	0.705	0.764	0.774
Lack of vocal inflection	0.684	0.842	0.827
Global rating	0.505	0.835	0.688
Alogia			
Poverty of speech	0.540	0.934	0.632
Poverty of content of speech	0.433	0.793	0.615
Blocking	0.425	0.856	0.269
Increased latency of response	0.740	0.870	0.803
Global rating	0.587	0.736	0.694
Avolition/apathy			
Grooming and hygiene	0.464	0.761	0.624
Impersistence at work or			
school	0.477	0.581	0.715
Physical anergia	0.549	0.806	0.755
Global rating	0.480	0.688	0.747
Anhedonia/asociality			
Recreational interests	0.556	0.778	0.741
Sexual interest and activity	0.270	0.562	0.605
Ability to feel intimacy	0.321	0.568	0.587
Relationships with friends			
and peers	0.394	0.724	0.620
Global rating	0.597	0.769	0.728
Attentional impairment			
Social inattentiveness	0.280	0.580	0.321
Mental status testing	0.718	0.831	0.854
Global rating	0.581	0.700	0.659

reliability of the positive symptom scale for the 24 interviews conducted by two psychiatrists. The concordance values for the first 24 of the 72 interviews conducted by one psychiatrist and one student were low, but the last 24 were very similar to the values for the interviews conducted by two psychiatrists. This suggests that examiners with less clinical experience need preliminary training before they can use the scales reliably.

The Cronbach alpha cohesion coefficients were high for the five groups of negative symptoms (affective flattening, .912; alogia, .814; avolition/apathy, .815; anhedonia/asociality, .864; and attentional impairment, .881) and the four groups of positive symptoms (hallucinations, .864; delusions, .850; bizarre behavior, .734; and formal thought disorder, .869).

We examined the coefficients of correlation (Pearson's r) for paired groups of negative symptoms and paired groups of positive symptoms to examine the relationship between groups of symptoms. There were better correlations between negative symptoms. The symptoms that were correlated best were affective flattening with alogia (r=.600), affective flattening with avolition/apathy (r=.474), affective flattening with attentional impairment (r=.490), alogia with avolition/apathy (r=.477), and alogia with attentional

TABLE 2. Interrater Reliability of Positive Symptoms in Interviews of 24 Psychiatric Patients Conducted by Two Psychiatrists

Symptom	Simple Cohen's kappa	Maximal Cohen's kappa	Weighted Cohen's kappa
Hallucinations			
Auditory hallucinations	0.840	0.893	0.942
Voices commenting	0.865	0.865	0.944
Voices conversing	0.753	0.753	0.896
Somatic or tactile hallucinations	1.000	1.000	1.000
Olfactory hallucinations	0.877	0.877	0.948
Visual hallucinations	0.544	0.869	0.712
Global rating	0.792	0.948	0.862
Delusions			
Persecutory delusions	0.789	0.894	0.906
Delusions of jealousy	0.357	0.357	0.357
Delusions of sin or guilt	0.563	0.672	0.600
Grandiose delusions	0.835	0.835	0.936
Religious delusions	0.652	0.791	0.886
Somatic delusions	0.626	0.813	0.738
Delusions of reference	0.500	0.750	0.768
Delusions of being controlled	0.805	0.935	0.889
Delusions of mind reading	0.682	0.809	0.890
Thought broadcasting	0.634	0.780	0.664
Thought insertion	0.661	0.796	0.877
Thought withdrawal	0.471	0.849	0.828
Global rating	0.684	0.842	0.878
Bizarre behavior			
Clothing and appearance	0.683	0.746	0.796
Social and sexual behavior	0.446	0.753	0.734
Aggressive and agitated			
behavior	0.611	0.944	0.750
Repetitive behavior	0.816	0.816	0.849
Global rating	0.704	0.763	0.854
Formal thought disorder			
Derailment	0.714	0.771	0.855
Tangentiality	0.495	0.647	0.693
Incoherence	0.628	0.702	0.814
Circumstantiality	0.623	0.774	0.525
Pressure of speech	0.622	0.924	0.761
Distractible speech	0.572	0.829	0.637
Clanging	0.306	0.583	0.441
Global rating	0.634	0.791	0.818

impairment (r=.416). The symptoms grouped under anhedonia/asociality appeared to be less correlated with those under alogia (r=.159), avolition/apathy (r=.385), affective flattening (r=.311), and attentional impairment (r=.054).

For the positive symptoms, the best correlations were between delusions and formal thought disorder (r=.422) and between delusions and bizarre behavior (r=.379). The correlations between other pairs of positive symptoms were as follows: delusions with hallucinations (r=.200), hallucinations with bizarre behavior (r=.102), hallucinations with formal thought disorder (r=.98), and bizarre behavior with formal thought disorder (r=.191).

We also examined the correlations between negative and positive symptoms by principal component analysis (table 3). In the 59 schizophrenic patients, the correlations between negative and positive symptoms did not present as clear a bipolar structure as that found by Andreasen and Olsen (3, 4), who reported that negative and positive symptoms were negatively correlated with one another. In addition, the principal

TABLE 3. Factor Loadings for Negative and Positive Symptoms in 24 Psychiatric Patients

	Factor							
Symptom	1	2	3					
Negative symptoms								
Affective flattening	.73	32	17					
Alogia	.63	31	28					
Avolition/apathy	.60	27	.16					
Anhedonia/asociality	.34	39	.43					
Attentional impairment	.73	.29	24					
Positive symptoms								
Hallucinations	.29	.08	.16					
Delusions	.34	.54	.41					
Bizarre behavior	.36	.20	.27					
Formal thought disorder	.31	.76	19					
% of variance explained	52.8	32.0	15.2					

component analysis suggested that the negative symptom group was more cohesive than the positive group, which was structured, primarily, around formal thought disorder and delusions.

CONCLUSIONS

Our results agree with the findings of other groups of investigators in Spain (Obiols et al.) and Japan (Okazaki et al.), who have reported high interrater reliability for the Scale for Assessment of Negative Symptoms and the Scale for Assessment of Positive Symptoms (N.C. Andreasen, personal communication, 1985).

It is evident that the internal consistency of the scales is good, with good cohesion and homogeneity within each scale. On the other hand, we have noted that a few symptoms, such as inappropriate affect and blocking, appear to fall outside the scale for negative symptoms, correlating more significantly with the positive symptoms. Andreasen and Olsen (3, 4) and Angrist et al. (7) came to the same conclusions for inappropriate affect.

The correlations for negative and for positive symptoms suggest that negative symptoms are a more cohesive clinical entity than positive symptoms. We failed to find the clear bipolarity of the negativepositive symptom complex that Andreasen and Olsen have found. Perhaps the distinction is not as clear as originally implied, but the composition of our sample (44 of the 59 schizophrenic patients had mixed schizophrenia) was quite different from the composition in Andreasen's original study (18 of 52 schizophrenic patients had mixed schizophrenia). We might account for this difference on the basis of the hospitalization policy in Italy. Since 1978 there have been no admissions to psychiatric hospitals. During the acute phase of their illness, patients are admitted to general hospital psychiatric wards; the duration of each hospitalization is about 1 month. This might account for the low number of patients with negative schizophrenia in our sample. In addition, differences in pharmacological

treatment and rehabilitation should be examined in detail.

In summary, transcultural "validation" of the concepts of positive, mixed, and negative schizophrenia needs more investigation beyond the practical usefulness of the negative and positive symptom scales. On the other hand, the "negative" or "deficit" syndrome can be evaluated reliably, is internally consistent, and should perhaps be given more attention by nosologists and phenomenologists who write diagnostic criteria and formulate typologies.

REFERENCES

1. Strauss JS, Carpenter WT, Bartko JJ: The diagnosis and understanding of schizophrenia, II: speculations on the processes that

- underlie schizophrenic symptoms and signs. Schizophr Bull 1974; 11:61–76
- Crow TJ: Molecular pathology of schizophrenia: more than one disease process? Br Med J 1980; 280:1–9
- 3. Andreasen NC: Negative symptoms in schizophrenia: definition and reliability. Arch Gen Psychiatry 1982; 39:784–786
- Andreasen NC, Olsen S: Negative vs positive schizophrenia: definition and validation. Arch Gen Psychiatry 1982; 39:789– 794
- Cazzullo CL: An integrated approach to therapy, in Schizophrenia: An Integrative View. Edited by Cazzullo CL, Invernizzi G. London, John Libbey, 1985
- Nie NH, Hull CH, Jenkins JG: Statistical Package for the Social Sciences, 2nd ed. New York, McGraw-Hill, 1975
- Angrist B, Rotrosen J, Gershon S: Differential effects of neuroleptics on negative versus positive symptoms in schizophrenia. Psychopharmacology (Berlin) 1980; 72:17–19

Childhood Experiences of Homeless Men

Ezra Susser, M.D., M.P.H., Elmer L. Struening, Ph.D., and Sarah Conover, M.P.H.

The authors interviewed homeless men in New York City shelters about their childhood experiences. Childhood placement away from the family was frequent, especially among former psychiatric patients. Childhood problem behaviors were also frequent.

(Am J Psychiatry 1987; 144:1599–1601)

The dramatic increase in the number of homeless persons in the United States is now widely recognized, but the factors that determine who becomes homeless are still not well understood. An adequate understanding will require analysis of these factors at three levels simultaneously: 1) the broad societal level, for instance, the "deindustrialization" of the major cities, 2) an intermediate level, for instance, the family network, and 3) the individual level, for instance, psychiatric disorder. In the stories of homeless persons one often finds factors at different levels inextricably intertwined (1).

As yet, little has been done to explore the role of the family unit and other social networks at the intermediate level. At the time we undertook a study of persons using the New York City shelter system (in 1985), we theorized that the family of origin was of great significance as a buffer against homelessness and consequent shelter use. We were unable to measure its effect directly. However, we gathered data on child-

Received Feb. 13, 1987; revised Aug. 3, 1987; accepted Aug. 24, 1987. From the Epidemiology of Mental Disorders Research Department, New York State Psychiatric Institute, New York. Address reprint requests to Dr. Susser, Nathan Kline Institute for Psychiatric Research, Orangeburg, NY 10962.

Supported by contract 85206/86206 with the New York City Department of Mental Health, Mental Retardation, and Alcoholism Services and by NIMH Fellowship in Psychiatric Epidemiology grant MH-13043 to Dr. Susser.

The authors thank Dr. Sara Kellermann.

Copyright © 1987 American Psychiatric Association.

hood experiences from which we hypothesize a role for the family unit. Our findings confirm and expand some limited results that have since come to hand on childhood experiences of homeless persons (2–4).

METHOD

In the spring and summer of 1985, a survey of men and women using the New York City municipal shelters for single adults was carried out under the auspices of the New York State Psychiatric Institute. (Homeless families are served by a separate shelter system and were not included in the study.) Executed in several partly independent components, the survey allowed for the replication and comparison of findings in each sample. We gave special attention to the "first-timer" sample of 223 men identified and interviewed as they entered the New York City men's shelter system for the first time. The "census" sample was a weighted representative sample of 695 men already residing in men's shelters at the time of the interviews. Relative to a first-timer sample, a census sample is inevitably weighted toward men with longer stays in the shelters. The attributes of interest could differ between the two samples for this reason alone.

The survey instrument was a 52-page interview that lasted an average of 80 minutes. Childhood experience was not the main focus of the study, and the interviewers were not aware of the theoretical constructs discussed here. The training of interviewers has been described elsewhere (5).

RESULTS

In both samples more than 70% of the respondents were under age 40, and more than 70% were members of ethnic minority groups. Fifteen percent of the first-timers and 12% of the census sample reported histo-

TABLE 1. Childhood Experiences of Men in New York City Shelters

			First-Tim	er San	ple			Census Sample				
	1	otal (N=223) ^a			f Psychiatric tion (N=33) ^a	Total (N=695) ^a			History of Psychiatric Hospitalization (N=80)		
Childhood Experience (before age 17)	N	%	95% Confidence Limits (%)	N	%	95% Confidence Limits (%)	N	%	95% Confidence Limits (%)	N	%	95% Confidence Limits (%)
Ever placed outside home		2000										
Foster care	27	12	8, 17	9	27	14, 46	61	9	7, 11	17	21	13, 32
Group home	26	12	8, 17	7	21	9, 39	47	7	5, 9	11	14	8, 24
Special residence	15	7	4, 11	4	12	4, 29	35	5	4,7	16	20	12, 31
Foster care, group home, and/or special residence ^b	51	23	18, 29	16	48	31, 66	115	17	14, 20	31	39	28, 51
Problem behaviors Ran away for 1 week	J1	2.3	10, 2)	10	70	31, 00	113	17	14, 20	31	37	20, 31
or longer	34	16	12, 22	7	23	11, 41	103	15	12, 18	21	26	17, 37
Expelled from school	65	30	24, 37	9	27	14, 46	135	20	17, 23	19	25	16, 36
Jail or reform school Ran away, expelled,	25	12	8, 17	4	12	4, 29	76	11	9, 14	9	11	5, 20
or jail ^b Any placement or	90	43	36, 50	11	34	19, 53	228	34	31, 38	38	49	38, 60
problem behavior	113	54	47, 61	20	61	43, 77	274	40	36, 44	53	67	55,77

^aFor ease of presentation, the number of missing values is not reported. For each nongrouped item this number was less than or equal to 4% of the total N. Further detail is available from the authors.

ries of psychiatric hospitalization (5, 6). Further descriptive data, including multiple measures of psychiatric status, may be obtained from one of us (E.S.).

Before age 17, 23% of the first-timers had been placed in foster care, group homes, other special residences, or more than one of these (table 1). In the census sample, 17% reported a childhood placement. Childhood placement was especially common in the life histories of homeless men who were former psychiatric inpatients. The association between a history of psychiatric hospitalization and childhood placement was significant for both the first-timers ($\chi^2=10.92$, df=1, p=.001) and the census sample ($\chi^2=38.90$, df=1, p=.001).

Running away for an extended period, school expulsion, going to jail or reform school, or more than one of these childhood events was reported by 43% of the first-timers and 34% of the census sample. One of these serious problem behaviors or placement outside the home was reported by more than half of the first-timers, somewhat less than half of the census sample, and well over half of those in each group who reported histories of psychiatric hospitalization.

DISCUSSION

The most striking finding in these data on homeless men in New York City shelters is the high frequency of a history of institutional separation from the family during childhood. Similarly, a childhood history of delinquency and/or running away was common. There was no comparison group in the study. We have sought elsewhere for comparable data on childhood experiences for other populations but have not found any that are appropriate. Even so, the figures seem high enough to demand attention.

In this report, we point to a likely connection between these childhood experiences and the family unit. At the same time, we do not minimize the recognized importance of social disadvantage or of individual disorder, each of which is also associated with the childhood experiences listed in table 1. A plausible hypothesis is that a combination of scarce family resources and conflictual family relationships is an important determinant of such childhood experience (7) as well as of adult homelessness. One could surmise that men with adverse family histories lack available and effective kin support to protect them from the hardships of the housing crisis. To varying degrees, some men may have been active agents in depleting family resources and initiating conflict.

Almost half of the former psychiatric inpatients in our study had been placed away from their families at some time during childhood. If our hypothesis is correct, for many of these patients the family's relatively limited capacity to protect them from homelessness contributed powerfully to their vulnerability. For some people we may need a substitute for, or reinforcement of, the supportive roles of the family over the course of a lifetime as a buffer against destitution, social isolation, and homelessness. Prevention of homelessness for psychiatric patients might thus usefully focus on those who have adverse family histories.

It should be kept in mind that some change over time and variation across regions can be expected in studies of homeless persons. We recognize, too, that men in municipal shelters may differ from other home-

bSome men reported more than one type of placement or problem behavior, so this row is not equivalent to the sum of the three previous rows.

less men in childhood experience. Possibly, men who were in institutions as children and/or were runaways have a lower threshold for utilization of municipal shelters. We found no evidence that men with these childhood experiences were likely to stay longer once in the municipal shelter. Relative to the first-timer sample in our study, the census sample was weighted toward men with longer stays in the shelters. However, for the items in table 1 the frequencies for the census sample were generally not higher than those for the first-timers.

REFERENCES

 Hopper K, Susser E, Conover S: Economies of makeshift: deindustrialization and homelessness in New York City. Urban Anthropology 1985; 14:183–236

- Trobe R, Crystal S, Diglio S: Homeless Youth in the New York City Municipal Shelter System. New York, Human Resources Administration, 1985
- 3. Baumann DJ, Beauvais C, Grigoby C, et al: The Austin Homeless: Report to the Hogg Foundation for Mental Health. Austin, University of Texas, 1985
- Bassuk EL, Rubin L, Lauriat AS: Characteristics of sheltered homeless families. Am J Public Health 1986; 76:1097–1100
- 5. Struening EL: A Study of Residents of the New York City Shelter System: Report to the New York City Department of Mental Health, Mental Retardation, and Alcoholism Services. New York, New York State Psychiatric Institute, Epidemiology of Mental Disorders Research Department, 1986
- 6. Susser E, Struening EL: First Time Users of the New York City Shelter System: Report to the New York City Department of Mental Health, Mental Retardation, and Alcoholism Services. New York, New York Psychiatric Institute, Epidemiology of Mental Disorders Research Department, 1987
- 7. Rutter M, Madge N: Cycles of Disadvantage. London, Heinemann Educational Books, 1976

Seasonal Affective Disorder With Summer Depression and Winter Hypomania

Thomas A. Wehr, M.D., David A. Sack, M.D., and Norman E. Rosenthal, M.D.

The authors describe 12 patients who regularly became depressed in summer. This pattern is opposite to one the authors previously described, in which patients became depressed in winter and responded to treatment with light. Temperature may influence some summer depressions.

(Am J Psychiatry 1987; 144:1602-1603)

S ince antiquity, physicians have recognized that affective episodes in some individuals recur regularly at certain seasons of the year (1). Seasonal patterns are of special interest because they suggest that changes in environmental factors trigger episodes of mania and depression. Indeed, for more than 2,000 years physicians believed that mania was caused by heat and was most prevalent in the summer and that depression was caused by cold and was most prevalent in the autumn (1).

A revival of interest in the seasonality of affective illness followed the discovery that bright light can be used to treat recurrent winter depression (2, 3). This finding strongly suggests that winter depressions are caused by annual variations in natural light.

In this report we describe 12 patients who regularly became depressed in the *summer* and were euthymic, hypomanic, or manic at other times of the year. In some cases, changes in the ambient temperature appeared to influence clinical state.

METHOD

Patients with seasonal affective disorder were referred by local psychiatrists familiar with our program or were recruited through a newspaper article describing our interest in seasonal forms of affective illness. All patients were evaluated by a psychiatrist, who used a structured interview to obtain information about

Presented at the 140th annual meeting of the American Psychiatric Association, Chicago, May 9–14, 1987. Received Aug. 15, 1986; revised June 29 and Aug. 14, 1987; accepted Sept. 1, 1987. From the Clinical Psychobiology Branch, NIMH. Address reprint requests to Dr. Wehr, Clinical Psychobiology Branch, NIMH, Rm. 4s-239, Bldg. 10, 9000 Rockville Pike, Bethesda, MD 20892.

affective symptoms, course of illness, treatment history, medical history, and family history.

One patient with a 15-year history of recurrent summer depressions participated in an experimental treatment in which, for 5 days, she was confined to an air-conditioned house and took cold showers for 15 minutes several times a day. Her clinical state before and after the experiment was evaluated by a psychiatrist who was blind to the treatment, using the Hamilton Rating Scale for Depression.

RESULTS

Twelve patients experienced depressions during the summer. Their mean \pm SD age was 53.0 ± 13 years, their age at onset of illness was 28.6 ± 14.8 years, and the number of annual recurrences was 19.6 ± 13.9 . Eight patients were women. According to the Research Diagnostic Criteria (RDC), their lifetime diagnoses were bipolar depression with hypomania (bipolar II) (N=8) and bipolar depression with mania (bipolar I) (N=4).

Their depressions began in March-June and ended in August-October; mania/hypomania began in September-October and ended in March-May. One patient had both summer (June-August) and winter (December-January) depressions with manias in the intervening months. The most common symptoms of summer depression were loss of energy and social withdrawal (N=12), anhedonia, low self-esteem, decreased talkativeness, and loss of interest (N=11), oversleeping, sadness, and hopelessness (N=10), guilt (N=9), and suicidal thoughts and decreased libido (N=8). Many of the patients reported that their clinical state appeared to be influenced by environmental factors, such as temperature (N=7), humidity (N=6), latitude (N=6), and light (N=4). Some patients who had severe summer depressions in the Washington, D.C., area had little or no difficulty when they were in New England.

The patients had previously been treated with psychotherapy (N=8), tricyclic antidepressants (N=8), lithium (N=6), neuroleptics (N=5), and ECT (N=1). Four patients had been hospitalized for depression, two for mania. The patient who was treated with exposure to cold and isolation from heat improved

dramatically on the 5th day and then relapsed 9 days after stopping the treatment. Her Hamilton depression rating was 21 before treatment, 6 at the end of treatment, and 30 after relapse.

Case Reports

Case 1. Ms. A, a 66-year-old married retired secretary, had had recurrent summer depressions, beginning in March—April and ending in August—October, for at least 15 years. When depressed, she was indecisive, had negative thoughts, and scarcely spoke. She had frequent crying spells and suicidal thoughts. Because of lethargy, lack of motivation, and difficulty concentrating, she engaged in no activity voluntarily and tried to sleep as much as possible. In the fall and winter she was energetic and outgoing. She required less sleep, was talkative, and had racing thoughts.

Her clinical state appeared to be influenced by changes in climate and weather. Her depressions began earlier than usual during spring vacations in Florida, and remissions occurred during midsummer vacations in New England. In Washington, D.C., we observed a temporary remission when an unusual cold front reduced the temperature to 39°F in June. Furthermore, she appeared to improve after an experimental cold treatment, as just described.

Case 2. Mr. B, a 45-year-old married professor, was energetic, ambitious, and enthusiastic but had marked difficulty functioning because of depression during the summer months in southern climates. His summer depressions had begun in childhood, when he lived near the Mediterranean Sea. In northern Europe and in New England he had little difficulty in summer. When he was in his mid-30s he moved to Washington, D.C., and again had severe depressions in the summer. For the next 8 years he was treated every summer with tricyclic antidepressants, which were beneficial. During his Washington summers he experienced remissions from his depression within 2–3 days if he returned to New England for brief visits.

DISCUSSION

The pattern of recurrent summer depressions and winter manias reported here has been noted previously (4–9). To our knowledge the first case was reported in 1854 by Baillarger (4), who described a young man who "at the approach of winter, for three years, is seized with great excitation ... is very active ... spends a lot of money." Then "as spring makes its influence felt . . . as the temperature rises, his physical and intellectual forces seem to leave him . . . he ends up totally depressed ... and finally makes suicide attempts." The patients described by Pilcz (5) and Kraines (6) are particularly interesting because two opposite seasonal forms of affective disorder occurred in the same individuals at different times in the course of illness, indicating, perhaps, that the two seasonal patterns may be manifestations of the same underlying illness. Our patient who had both summer and winter

depressions might be considered to have both forms of the illness at once.

The regular occurrence of depression in the late spring and summer in our patients is consistent with the epidemiological finding that the incidence of depression and suicide is increased at these times of year (10). Investigations of individual patients with recurrent summer depressions may help to elucidate seasonal risk factors for depression and suicide in the general population.

Changes in environmental temperature may have influenced some patients' clinical states. However, this hypothesis needs to be tested in controlled studies, and other environmental and psychological factors need to be considered.

The existence of this "reverse" form of seasonal affective disorder and its seeming responsiveness to changes in the physical environment have important implications for clinical practice and for research. First, it may be possible to prevent or modify summer depression and winter mania by manipulations of environmental factors, such as temperature, as has previously been shown with light for winter depression. Second, such manipulations may prove extremely useful as probes in experimental investigations of these conditions. Third, a vast animal literature on metabolic and behavioral adaptations to seasonal changes in the environment can be readily applied to the understanding and treatment of this specific form of affective disorder.

REFERENCES

- Jackson SW: Melancholia and Depression From Hippocratic Times to Modern Times. New Haven, Yale University Press, 1986
- 2. Lewy AJ, Kern HA, Rosenthal NE, et al: Bright artificial light treatment of a manic-depressive patient with a seasonal mood cycle. Am J Psychiatry 1982; 139:1496–1498
- Rosenthal NE, Sack DA, Gillin JC, et al: Seasonal affective disorder: a description of the syndrome and preliminary findings with light treatment. Arch Gen Psychiatry 1984; 41:72–80
- 4. Baillarger J: Note sur une genre de folie dont les accès sont caractérisés par deux périodes régulières, l'une de dépression et l'autre d'excitation. Gazette Hebdomadaire de Medicine et Chirurgie 1854; 132:263–265
- Pilcz A: Die periodischen Geistesstörungen. Stuttgart, West Germany, G Fischer Verlag, 1901
- Kraines S: Mental Depressions and Their Treatment. New York, Macmillan, 1957
- Arnold OH, Kryspin-Exner K: Zur Frage der Beeinfrussung des Verlaufes des manisch-depressiven Krankheitsgeschehens durch Antidepressiva. Wien Med Wochenschr 1965; 45/46:929–934
- 8. Baastrup CP, Schou M: Lithium as a prophylactic agent: its effect against recurrent depression and manic-depressive psychosis. Arch Gen Psychiatry 1967; 16:162-172
- 9. Kukopulos A, Reginaldi D: Does lithium prevent depressions by suppressing manias? Int Pharmacopsychiatry 1973; 8:152–158
- Rosenthal NE, Sack DA, Wehr TA: Seasonal variation in affective disorders, in Circadian Rhythms in Psychiatry. Edited by Wehr TA, Goodwin FK. Pacific Grove, Calif. Boxwood Press, 1983

Drug and Alcohol Abuse by Bulimic Women and Their Families

Cynthia M. Bulik, M.A.

The author studied patterns of drug and alcohol abuse in 35 bulimic women, 35 healthy control subjects, and their first- and second-degree relatives. The bulimic women and their families had significantly higher rates of substance abuse disorders.

(Am J Psychiatry 1987; 144:1604–1606)

M odels of bulimia that focus on the salient eating abnormalities and the associated affective disturbances are well documented (1-3). In the past few years, the relation between bulimia and addictive disorders has received greater attention. Early studies that examined the clinical characteristics of bulimia indicated that significantly more bulimic women reported histories of substance abuse than did women who had anorexia nervosa or were normal control subjects (2, 4). The higher rate of substance abuse by bulimic women than by anorexic women was often attributed to the later age at which the onset of bulimia occurs. Few studies have examined the use of alcohol during the acute phase of bulimia. Similarly, the frequency and severity of other substance abuse disorders in bulimic individuals are inadequately understood.

Studies of the occurrence of substance abuse in the families of normal-weight bulimic subjects have shown inconsistent results, some claiming a greater prevalence of alcohol abuse in these families and others citing no difference between the families of bulimic and control subjects (2, 5, 6).

The pilot study (7) for the current investigation examined the family relationships and family psychiatric histories of 12 bulimic subjects and 12 control subjects. The bulimic subjects were 22.5 times more likely than the control subjects to have a first- or second-degree relative with alcoholism. Although the sample was small, the findings were provocative.

This report presents the initial results from a larger study that examined the presence and severity of other psychiatric disorders in bulimic patients and the combined effects of family psychiatric history and family environment on the development of bulimia.

METHOD

Thirty-five women who met the DSM-III criteria for bulimia and 35 normal control subjects participated in the study. All subjects were recruited through announcements on radio and television and in local newspapers and magazines. The announcements directed to bulimic women and control subjects differed only in the specification of "bulimic women" and "healthy women."

All bulimic subjects were required to meet the DSM-III criteria for bulimia at the time of the study as determined by the Diagnostic Interview Schedule (8). Three potential subjects were excluded because they had a history of anorexia nervosa. Control subjects were screened for eating disorders, major psychoses, alcoholism, major depression requiring hospitalization, and medical disorders that could affect eating behavior or body weight. One potential control subject was excluded because of alcoholism and another because of celiac sprue.

After contacting the investigators, potential subjects underwent a brief telephone screening that reviewed their weight and dieting history, medical history, and current medication status. Individuals who met the preliminary inclusion criteria were invited to participate in the investigation.

After giving informed consent, all subjects completed a battery of psychological tests. They then participated in a 4-5 hour interview session that consisted of two parts. Part 1 included the Family History Research Diagnostic Criteria (RDC) and the Diagnostic Interview Schedule. The clinician administering these interviews then determined the subject's suitability for inclusion. If all inclusion criteria were met, the subject was invited to participate in part 2 of the interview. If the subject met some exclusion criteria, she was excluded from the study at that time.

Received June 16, 1987; accepted Aug. 24, 1987. From the Department of Psychology, University of California, Berkeley. Address reprint requests to Ms. Bulik, Anxiety Disorders Clinic, Western Psychiatric Institute and Clinic, 3811 O'Hara St., Pittsburgh, PA 15213.

Supported by a Founder Region Fellowship Award and a Phi Beta

Kappa Dissertation Fellowship Award.
The author thanks Sarah Hall, Angie Kaner, and Marcia Rorty for assistance in interviewing and Patrick Sullivan for editorial support. Copyright © 1987 American Psychiatric Association.

TABLE 1. Psychopathology in 35 Bulimic and 35 Control Subjects and in Their Relatives

Diagnosis	Bulimic Subjects (N=35)		Control Subjects (N=35)		Odds	95% Confidence
	N	%	N	%	Ratio	Interval
Subject's DSM-III diagnosis						
Alcohol abuse ^a	17	48.6	3	8.6		
Alcohol dependenceb	8	22.9	0	0.0		
Drug abuse ^b	9	25.7	0	0.0		
Drug dependence ^b	12	34.3	1	2.9		
Major depression ^a	21	60.0	3	8.6		
Suicide attempt ^a	16	45.7	3	8.6		
Relatives' Family History RDC diagnosis						
Alcoholism						
First-degree relatives	17	48.6	7	20.0	3.78	1.31, 10.91
First- and second-degree relatives	21	60.0	7	20.0	6.00	2.06, 17.48
Drug use disorder						
First-degree relatives	8	22.9	6	17.1	1.43	0.44, 4.67
First- and second-degree relatives	8	22.9	6	17.1	1.43	C.44, 4.67
Major depression						
First-degree relatives	13	37.1	5	14.3	3.55	1.10, 11.41
First- and second-degree relatives	14	40.0	5	14.3	4.00	1.25, 12.80
Major psychopathology in both parents	8	22.8	0	0.0	*****	·

^aSignificant difference between groups (Fisher's exact test, p < .0001).

Part 2 included the Family Environment Interview (a semistructured interview developed by the author). Part 1 and part 2 were conducted by different clinicians, all of whom were trained advanced doctoral students in clinical psychology. Part 2 interviewers were blind to the subjects' bulimic or control status. Subjects were paid \$10.00 each for their participation and were provided with treatment referrals when they requested them.

RESULTS

Bulimic and control subjects did not differ significantly in age (mean \pm SD=30.3 \pm 8.5 versus 31.0 \pm 8.9 years; Student's t=-0.31, df=68, p=.75), height (mean \pm SD=65.0 \pm 2.5 versus 65.2 \pm 2.7 in.; t=-0.14, df=68, p=.89), weight (130.5 \pm 18.3 versus 137.6 \pm 17.1 lb.; t=-1.66, df=68, p=.10), education (15.3 \pm 2.2 versus 15.9 \pm 1.6 years; t=-1.28, df=68, p=.21), or socioeconomic status (χ^2 =2.98, df=3, p=.40; subjects were classified as lower, lower-middle, middle, or upper-middle class on the basis of parents' income, subjective perception of social class, and perceived degree of need). The bulimic sample consisted of two Asian, one black, 28 Caucasian, and four Hispanic subjects; the control sample consisted of two Asian, five black, 25 Caucasian, and three Hispanic subjects.

Table 1 gives the diagnostic profiles of the bulimic and control subjects according to the Diagnostic Interview Schedule and of their families according to the Family History RDC. The most common concomitant diagnoses for the bulimic subjects were major depression and alcohol abuse. Alcohol dependence, drug

abuse, drug dependence, and suicide attempts were also significantly more frequent in the bulimic subjects than in the control subjects. Ten bulimic women suffered from both alcohol and drug use disorders.

Table 1 also displays the odds ratios for the most commonly occurring psychiatric disorders in family members. They were calculated for first-degree relatives (parents and siblings) and for first- and second-degree relatives combined (parents, siblings, and grandparents). More distant relatives were excluded from the analysis because of inconsistent and unreliable reporting.

Alcoholism and major depression occurred significantly more frequently in the first- and second-degree relatives of bulimic subjects than in those of control subjects. Although the odds ratio for drug use disorder was slightly higher also, the 95% confidence interval included unity. In addition, both parents of eight of the bulimic women had major psychopathology; no control subject had two parents with major psychopathology (the odds ratio was indeterminant due to the denominator of 0).

Separate analyses were performed for the relatives of alcoholic bulimic and nonalcoholic bulimic women. The distribution of family psychiatric histories did not differ significantly between these two subgroups.

DISCUSSION

Two major trends emerged from the initial analyses of this investigation of a broad-based community sample of women with bulimia. First, alcoholism and drug dependence occurred significantly more frequently in the women with bulimia than in the normal

^bSignificant difference between groups (Fisher's exact test, p = .002).

Odds ratio indeterminate due to the denominator of 0.

control subjects. In addition, a substantial portion of the bulimic women experienced problems with milder forms of drug and alcohol abuse.

Second, the most frequently occurring psychopathology in the first- and second-degree relatives of the bulimic subjects was alcoholism, with major affective disorder the second most frequent. The rates of these disorders were significantly higher in the relatives of the bulimic subjects than in the relatives of the control subjects. It is important to note that the higher rate of alcoholism in these relatives was not due primarily to the relatives of the subgroup of alcoholic bulimic subjects. Alcoholism was present as often in the families of the bulimic subjects who did not exhibit alcohol-related problems. More detailed analyses suggest that there may be a higher density of alcoholism in the families of alcoholic than of nonalcoholic bulimic patients, perhaps indicating a greater genetic loading for addictive disorders.

These diagnostic profiles indicate that bulimia can occur in an individual along with alcoholism or drug use disorders as part of a behavior pattern of multiple addictions. Since bulimia is the presenting problem of many women who seek treatment, it is imperative that clinicians be aware that an associated addiction may exist in these patients, because this may dictate alternative treatment approaches.

These data may also shed light on the familial transmission of alcoholism in women. Goodwin et al. (9) noted that although the rate of alcoholism for the adopted daughters of alcoholics (3%-4%) was higher than that for the general population (0.1%-1%), it did not match the high rate for sons of alcoholics (18%). Similarly, nonadopted daughters of alcoholics were more likely to develop depression than their adopted counterparts (10). Goodwin et al. (9, 10) hypothesized that individual biological factors (e.g., decreased tol-

erance to alcohol) and environmental factors (e.g., societal restrictions on female drinking) may play a more important role in the expression of alcoholism in women than in men. Perhaps bulimia, both in combination with other addictions and in its pure form, is an alternative expression of a genetic predisposition—one more tempered by social and environmental forces.

Further analyses of the data from this project will examine in greater depth the differences in personality and family characteristics between the bulimic subjects with multiple addictions and the subjects with uncomplicated bulimia.

REFERENCES

- 1. Andersen AE: Anorexia nervosa and bulimia: a spectrum of eating disorders. J Adolesc Health Care 1983; 4:15-21
- Stern SL, Dixon KN, Nemzer E, et al: Affective disorder in the families of women with normal weight bulimia. Am J Psychiatry 1984; 141:1224–1227
- Russell G: Bulimia nervosa: an ominous variant of anorexia nervosa. Psychol Med 1979; 9:429–522
- 4. Brisman J, Seigel M: Bulimia and alcoholism: two sides of the same coin? J Subst Abuse Treat 1984; 1:113-118
- Hudson JI, Pope HG Jr, Jonas JM, et al: Family history study of anorexia nervosa and bulimia. Br J Psychiatry 1983; 142:133– 138
- Pyle RL, Mitchell JE, Eckert ED: Bulimia: a report of 34 cases.
 J Clin Psychiatry 1981; 42:60–64
- Bulik CM: Alcohol use and depression in women with bulimia.
 Am J Drug Alcohol Abuse 1987; 13:343–355
- Robins LN, Helzer JE, Croughan J, et al: National Institute of Mental Health Diagnostic Interview Schedule. Arch Gen Psychiatry 1981; 38:381–389
- Goodwin DW, Schulsinger F, Knop J, et al: Alcoholism and depression in adopted-out daughters of alcoholics. Arch Gen Psychiatry 1977; 34:751–755
- Goodwin DW, Schulsinger F, Knop J, et al: Psychopathology in adopted and nonadopted daughters of alcoholics. Arch Gen Psychiatry 1977; 34:1005–1009

Book Forum

Nancy C. Andreasen, M.D., Ph.D., Editor

The books for this month are a holiday gift list; books to broaden the library and the mind, to provide pleasure and enjoyment, to give to oneself and others.

LITERATURE

The Collected Prose, by Robert Lowell. New York, Farrar-Straus-Giroux, 1987, 350 pp., \$25.00.

Robert Lowell was one of America's finest poets. Although fundamentally coherent, his work is highly diverse. Lord Weary's Castle, his first major published volume (1946) (reprinted in 1968 [1]), reflects a fine early phase when he was immersed in Roman Catholicism as Eliot and others had been. Life Studies (1959) (reprinted in 1967 [2]) heralded a major change in direction and launched what has come to be known as "the confessional school." Written after Lowell had had several episodes of manic-depressive illness ("attack[s] of pathological enthusiasm") and had been hospitalized at Payne-Whitney and McLean, Life Studies introduced a merciless personal probing to the poetic style of the 1960s and later. I first met Lowell through Life Studies. It occurred in the old frame house of William James in Cambridge in 1959; I was introduced through James's son "Billy," who read "Waking in the Blue" to me aloud one afternoon after we had completed our weekly task of working on his memoirs together:

The night attendant, a B.U. sophomore, rouses from the mare's nest of his drowsy head propped on the Meaning of Meaning.

He catwalks down our corridor.

Azure day makes my agonized blue window bleaker.

Crows maunder on the petrified fairway.

Absence! My heart grow tense

As though a harpoon were sparring for the kill.

(This is the house for the "mentally ill.")

"God, he's good," Billy James said. He was.

Lowell's life and career are a microcosm of issues concerning the nature of creativity. He blended a personal history of affective disorder with a family tradition of creativity and achievement. He was the only child of Bob Lowell and Charlotte Winslow, both from distinguished New England families. His ancestors included two major American poets: James Russell Lowell and Amy Lowell. He describes in these pages of collected prose how he was never really aware of the literary traditions in his family, however, until he was in his 20s. J.R. Lowell was known in his family as "the ambassador" and Amy as a bit of an eccentric embarrassment.

The three final essays in this volume, "Antebellum Boston," "91 Revere Street," and "Near the Unbalanced Aquarium," are fragments from an autobiography that he was preparing. Other biographical sections include "A Conversation With Ian Hamilton," who wrote his official biography, and "An Interview With Frederick Seidel." Lowell emerges as a young man who was insecure and socially inept. His immediate family traditions were not literary and not even particularly Brahmin. His father's major identity was as a naval officer. In college, Lowell began to find his own feet as a poet. He left Harvard for the company of the emerging poetic deans of the era, such as Tate and Ransom. Comically, one summer he went to visit the Tates, who were already overwhelmed with the company of Ford Madox Ford and his wife and secretary. When Lowell offered himself as a guest as well, Mrs. Tate attempted to politely refuse by saying there was no room unless he pitched a tent on the lawn. A few days later Lowell arrived with a Sears Roebuck tent and stayed the summer. Lowell's comment: "The household groaned with the fatigued valor of Southern hospitality." But in spite of his inept immaturity at the time, which he later recognized, Lowell was a loyal and grateful friend: "Like a torn cat, I was taken in when I needed help and in a sense I have never left." Lowell's ascent to poetic achievement, although perhaps coded in his genes, was not easy.

Lowell suffered much of his life from episodes of depression and mania. He was treated initially with new oleptics, as described in "Near the Unbalanced Aquarium." When lithium became available, he responded remarkably well, saying to his friend Bob Giroux: "It's terrible, Bob, to think that all I've suffered, and all the suffering I've caused, might have arisen from the lack of a little salt in my brain." He seemed to believe, in fact, that his creativity was increased overall when his manic periods were brought under better control.

In addition to containing fragments of Loweli's autobiographical writings, The Collected Prose also contains a series of essays summarizing his ideas on social and historical issues and literary criticism. They include a short essay on the Gettysburg Address, a letter to President Roosevelt (1943) indicating that he wished to obtain conscientious objector status (leading to his incarceration in the Federal Correctional Center in Banbury, Conn., for 1 year and 1 day), and a letter to President Johnson (1965) turning down an invitation to a festival of the arts at the White House because of his concern over the Vietnam war. There are essays on "Art and Evil," "Poets and the Theater," and "Hopkins' Sanctity." Lowell was clearly a warm friend and (unlike many writers) an enthusiastic admirer of the work of his fellow poets. The volume contains many affectionate meditations on the lives and work of his friends, including Ford Madox

Ford, Allen Tate, Randall Jarrell, Sylvia Plath, William Carlos Williams, John Berryman, Wallace Stevens, and Robert Penn Warren, to mention only some.

This is prose written by a fine poet, and it contains many memorable turns of phrase that make this book a joy to read. One cannot resist quoting some of them. Of Randall Jarrell's brilliant intensity: "He himself, though often fierce, was incapable of vulgarity, self-seeking, or meanness. He could be very tender and gracious, but often became tone-deaf to the inanities and dishonesties that make human relationships tolerable." Of John Berryman's suicide: "I somehow smile, though a bit crookedly, when I think of John's full life, and even of the icy leap from the bridge to the hard ground. He was springy to the end, and on his feet." Of Shakespeare's capacity to write dramas so powerfully and completely that nothing seems to be left to write: "The English stage's most terrible affliction is not Milton, its enemy, but Shakespeare, its friend." Of Emily Dickinson's unnervingly unconventional poetic style and subject matter: "The ladder she climbed points to Godless eternity; its rungs were carved from scripture . . . it was as if she had applied the subtleties of prose to the alien goal of poetry; she made the language of her contemporaries obsolete—if anyone had heard her." Of the relationship between his own Calvinist background and his period of Catholicism: "From zealous atheist Calvinist to a believing Catholic is no great leap. We overhammer the debating points. Yet Calvinism is a too conceived abstractexpressionist church of Rome."

The Lowell persona that emerges from these writings is that of a suffering, thoughtful, loving, and concerned man. He tried to believe what was right and to live what he believed. His challenge to America, written in 1964 in conclusion to a brief address to the Library of Congress on the Gettysburg Address, concludes with a warning that bears repetition: "Lincoln's occasional speech about a hundred years ago still rings today when our country struggles with four almost insoluble spiritual problems: how to join equality with excellence, how to join liberty with justice, how to avoid destroying or being destroyed by nuclear power, and how to complete the emancipation of the slaves."

REFERENCES

- Lowell R: Lord Weary's Castle and The Mills of the Kavanaughs. Orlando, Fla, Harcourt Brace Jovanovich, 1968
- Lowell R: Life Studies and For the Union Dead. New York, Farrar-Straus-Giroux, 1967

N.C.A.

The Freud Scenario, by Jean-Paul Sartre; edited by J.-B. Pontalis; translated by Quintin Hoare. Chicago, University of Chicago Press, 1986, 549 pp., \$24.95.

"Let's get Jean-Paul Sartre to write a screenplay for a film about Sigmund Freud." This was the brainstorm of the late Hollywood giant John Huston, and although a Sartre film was never made, the scenario was written and has now been translated into English. The idea of having the leading European intellectual of the time write a screenplay about the founder of psychoanalysis was probably not based on a thorough understanding of Sartre's work.

Sartre, one of this century's most introspective philosophers, had elaborated in his masterwork on consciousness, *Being and Nothingness* (1), the concept of "bad faith" as a

counter to Freud's theory of repression and unconscious defenses. Pontalis, who provides a brief but excellent introduction to *The Freud Scenario*, reports that Sartre, on the basis of his own concept of "bad faith," had once commented, "I regard mad people as liars," and he apparently regarded Freud as "a mediocre philosopher none of whose concepts would stand up to scrutiny." Getting Sartre to do Freud would have made more sense if you were planning a film that would discredit psychoanalysis. Huston had no such idea: the year was 1958, the heyday of psychoanalysis in the United States, and Huston's concept was to capture the heroic intellectual effort that led Freud to discount the sexual trauma theory of hysteria and to discover the Oedipus complex. But perhaps John Huston knew something about Sartre that was not then apparent in his philosophical writings but that was to dominate the latter part of his

In Being and Nothingness, Sartre discusses at great length the narrow technical and philosophical problem of "other minds." Later in that book he briefly describes his own "existential psychoanalysis," in which he repudiates Freudian psychoanalysis. He illustrates why psychoanalysis is in error with a brief discussion of the life of Flaubert and standard psychoanalytic attempts to explain why he became an artist. But Sartre does not attempt an existential psychoanalytic explanation of Flaubert in that book. A massive biography of Flaubert would be Sartre's last great intellectual enterprise. He had turned from the narrow technical question about other minds to the broader question, What can we know about another person? Pontalis suggests that, although The Freud Scenario is a minor work in Sartre's legacy, the project may have been a turning point in his intellectual career.

The fascination of The Freud Scenario is the opportunity it gives the reader to see how Sartre "imagined Freud" and how Sartre portrays Freud's "project." Sartre apparently did not do a great deal of biographical research. His sources were the first volume of Jones's biography (2), which had just been translated into French, "The Interpretation of Dreams" (3), "Studies on Hysteria" (4), the Freud-Fliess correspondence, and Freud's episode with Charcot as summarized by one of his research assistants. The last of these becomes the weakest and most melodramatic part of the scenario. But as Sartre prepared himself to write the screenplay, his critical and dismissive attitude toward Freud changed. He was amused and delighted to discover that Freud "was neurotic through and through." This seems to have given Sartre not only sympathy for a more human Freud but also the feeling that he was dealing with a kindred spirit: they both were men whose personalities were affected by winning the oedipal struggle. Freud also, like Sartre, was a man whose "ideas had led him into a desperate impasse," and Sartre concludes that Freud had to cure himself to find a way out of the impasse. Sartre, who in Being and Nothingness had scoffed at such things, would subsequently subject himself to various projective psychological tests and briefly contemplated undertaking psychoanalysis, perhaps to find his own way out. His subsequent work, particularly the autobiographical study The Words (5), makes it clear that he no longer rejected Freud's ideas, nor did he rely on "bad faith" as a counter to psychoanalysis. Like others who discounted Freud on rational and logical grounds, he could not dismiss Freud's basic contribution, the role of the irrational in human life.

The portrait of Freud painted by Sartre is fictional in the sense that it does not accurately present the facts of Freud's life as they are now known, but that criticism should not

deter readers. Sartre's conception of Freud is fascinating and brilliant and contains truth, even if it is not the truth. Freud is seen as a man in search of a father figure. Meynert, Breuer, and Fliess all serve that purpose in turn. Behind them all is the gentle, doting, but ineffective failure, Jacob Freud, the father whom Freud loved for his gentleness and hated for his weakness. Freud looks for his father's missing strength in father figures, but he also searches for their weakness as he unconsciously lives out his Oedipus complex.

Freud is imagined by Sartre first as an angry, ambitious young man unaware of his rage and its meaning. Toward his patients, he is tough and conscientious but proceeds like a kind of detective determined to catch them in verbal contradictions that conceal the true trauma. Digging into his patients' lives, Freud discovers everywhere the corruption and the perversity of the fathers and the muck of sex and violence. Breuer is afraid of the muck when it touches him. So is Freud, but he is led on by an angry determination to get to the bottom of things and by his rebellious ambitions. Fliess is a Satanic figure, a parody of the mad scientist, who sees in Freud a disciple who will provide data for his own theories of numerical cycles and sexuality and bisexuality dominating human existence. But Breuer's fear of the muck, Fliess's numerology, and Freud's angry determination cannot create a therapy that helps neurotic victims. It is only when Freud fully accepts the fact that he too is neurotic, when he puts aside his angry pride, when he addresses his patient as a collaborator in the project of mutual discovery, that psychoanalytic theory and psychoanalytic therapy are achieved. Freud triumphantly cures his own neurosis and learns to live with what he has discovered and so does the composite hysterical patient of The Freud Scenario. Freud resigns himself to the fact that he must be his own father and in that process is able to feel real love for Jacob Freud. Ironically, Freud is shown from the beginning to the end of the scenario as a man determined to conceal the personal origins of his ideas from his biographers. Sartre is one of the many who have refused to honor Freud's lifelong wish.

Family therapists will find The Freud Scenario particularly provocative because Sartre, for his own reasons, depicts Freud interacting with the parents of his patients, and the crucial parent is even present in the therapeutic session to acknowledge the truth of the family dynamic. Freud's cure through truth is truth for the actual family and not just the family of the patient's description.

The Freud Scenario is filled with brilliant perceptions and demonstrates once again the genius of Sartre's psychological sensibilities, here tailored for the mass audience. The screenplay, a celebration of Freud's discovery of truth and compassion, would have required a 4-hour film. Asked to revise it, Sartre stubbornly produced an even longer version. The mediocre film about Freud that was eventually made did not have Sartre's name connected to it. But the fascinating scenario, now available in this excellent translation, demonstrates that, when John Huston had the brainstorm of getting Sartre to do Freud, he performed a service to literature, to the history of ideas, and, perhaps, to Sartre himself.

REFERENCES

- 1. Sartre J-P: Being and Nothingness. New York, Philosophical
- Library, 1956
 2. Jones E: The Life and Work of Sigmund Freud, vols 1–3. New York, Basic Books, 1953-1957
- 3. Freud S: The interpretation of dreams (1900), in The Complete Psychological Works, vols 4-5. London, Hogarth Press, 1953

- 4. Breuer J, Freud S: Studies on hysteria (1893-1895). :bid, vol 2, 1957
- 5. Sartre J-P: The Words. New York, Fawcett World Library,

ALAN A. STONE, M.D. Cambridge, Mass.

The Prince of Tides, by Pat Conroy. Boston, Houghton Mifflin Co., 1986, 567 pp., \$19.95.

We read novels for enjoyment, and Pat Conroy, in his four books before The Prince of Tides (1-4), has been able to provide it. Three of the four, all dealing with coming of age in the South, have become motion pictures, but I expect that we will not be able to see this one in the theater. Its scope is simply too wide. This book, Conroy's longest and most ambitious work to date, deals with issues of great interest to psychiatrists. The narrator, Tom Wingo, and his tragic, violent family could all be numbered among our patients. Tom's twin sister Savannah is a suicidal, psychotic, frequently hospitalized poet, whose diagnosis-borderline, multiple personality, schizophrenia—is open to speculation. The entire family seems to provide a good series of case histories of posttraumatic stress disorder and unresolved grief. Given the love-hate relationship between psychiatrists as readers and fiction treating topics in our area, can we still enjoy such a book? I did, and Conroy's skill with multiple themes, characters, and scenes made it possible.

Conroy is a storyteller in the grand tradition, and it is hard to do justice in a small space to his complicated, inclusive, and eventually revealing plot. The major process is the incremental, retrospective unfolding of the history of the Wingos through 27 almost self-contained chapters. The novel opens in early summer in the present and ends with the end of summer, encompassing Tom's journey to New York to provide assistance to his sister's psychiatrist. Savannah has survived her most serious suicide attempt only to remain psychotic and incapable of giving a coherent history.

The bulk of the novel develops through Tom's sessions with Dr. Lowenstein, the psychiatrist, as he tells her the family story his sister cannot face. The reader learns of their childhood in the beauty of the Carolina salt marshes; their violent father; their mother, an abuse victim, major denier, romantic, and ultimate power seeker; and their brother Luke, an innocent possessed of great strength, who fights back against many betrayals but is unable to survive the ultimate betrayal that destroys his home. In the dozens of stories Tom tells, physical abuse, social striving, art, and the bonds that hold families together beyond all reason are laid open. Although they all serve to give insight into the characters, the more digressive sections, such as the account of how integration came to the local high school football team, or Tom's recollection of his grandfather's walk with a huge wooden cross each Good Friday, have great value as entertainment and distraction from the book's grimmer moments. Although the focus of his stories is on understanding Savannah, Tom manages to see the patterns of his own failures at marriage, at work, at facing challenges. He eventually comes to love Lowenstein, herself the victim of emotional abuse from a narcissistic husband.

We encounter much violence in this book, some of it lurid or almost beyond belief, and some of Savannah's madness may seem overdrawn to psychiatric professionals, but in the end we enter into a story of a family's war on itself that has the ring of truth.

If *The Prince of Tides* succeeds as a good story or cycle of stories, what else does it provide? If we are looking for someone to make brilliant art out of the true process of psychotherapy, we will be disappointed.

Psychiatry has found far worse portrayals in literature, but Savannah's rather miraculous recovery and her doctor's questionable, if sincere, behavior as she works with Tom are not what we would choose as ideal images for the world to judge us by. The novel does justice to the ever-fascinating theme of love and pain, and its probing of the closed, defended, wounded Tom is an insightful view of a man struggling to live honestly with himself and to overcome his past in dealing with women. Ultimately, Pat Conroy narrowly avoids the swamp of melodrama and, in doing so, provides us with an absorbing novel that can get us through many evenings, show us things that those fortunate enough not to grow up in violent families may not know, and certainly leave us asking questions about the bonds between ourselves and those we love.

REFERENCES

- 1. Conroy P: The Boo. New York, Pinnacle Books, 1981
- 2. Conroy P: The Water Is Wide. Boston, Houghton Mifflin, 1972
- 3. Conroy P: The Great Santini. Boston, Houghton Mifflin, 1976
- Conroy P: The Lords of Discipline. Boston, Houghton Mifflin, 1980

WILLIAM G. WALTER-RYAN, M.D. Birmingham, Ala.

Bad Karma: A True Story of Obsession and Murder, by Deborah Blum. New York, Atheneum, 1986, 311 pp., \$17.95.

Most psychiatrists and psychotherapists (and, I am sure, lawyers) are aware of the 1974 landmark decision of the California Supreme Court now known as the *Tarasoff* decision. Until then, if a patient during a therapy session voiced any intent to harm another individual, the therapist was not obligated to alert that particular individual or the authorities. In fact, the therapist was protected under the umbrella of doctor-patient confidentiality. No more, at least in California. The court said that psychotherapists have a legal duty to warn intended victims of patients who are believed dangerous to them. Such a duty, the court said, is not a breach of the therapist-patient privilege of confidentiality.

Bad Karma is a dramatization in the form of a novel of true events that led to the Tarasoff case. Prosenjit Poddar is a brilliant University of Berkeley graduate student, an Indian of the untouchable class. Tanya Tarasoff is a local college girl who is attractive but insecure and comes from a disturbed home. She has a desperate need to be wanted and loved. These two young people meet and fall in love. What is for her an ego-satisfying casual flirtation becomes for him an obsession. Their ambivalent and somewhat sadomasochistic relationship culminates in Poddar's becoming psychotic and killing Tarasoff.

Blum has toiled tremendously to get the facts. She studied the court transcripts, police reports, and newspaper accounts and interviewed hundreds of people. She even went to India twice and visited Poddar's college and village. In fact, Blum worked on the story for 8 years before writing this book. That is remarkable perseverance, involving hard work and dedication (almost like going to medical school). Blum's

writing style is fluent and powerful. Her characterizations are superb. Her vivid descriptions of the parties, demonstrations, and college life in general draw the reader in for a vicarious experience of the Berkeley campus scene in the late 1960s.

I highly recommend this book to people working in the mental health field. Apart from the legal implications, the book in itself is a study of culture, personalities, and mental illness. It is thought provoking to anybody working in the field of mental health and raises many questions regarding the etiology of mental illness. Was it Poddar's premorbid schizoid personality that led to schizophrenia? Was his being from an untouchable class and being looked down on socially in India responsible for his nervous breakdown? My own impression is that mental illness is not necessarily more common in untouchables than in other classes. One could just as well say that it was Poddar's landing in California, especially Berkeley, which caused his mental illness. In actuality we do not know the exact etiology of mental illness-whether cultural, social, environmental, or organic toxic factors are responsible.

Karma is a philosophical concept of one's fate or destiny, believed to be related to deeds done in a past life. Bad karma seems to apply to both Poddar and Tarasoff. I think the title of the book is most apropos because in the final analysis the etiology of mental illness (and, for that matter, many other illnesses) seems explainable only on the basis of bad karma.

VASANT P. DHOPESH, M.D. Philadelphia, Pa.

HISTORY

The Anatomy of Madness: Essays in the History of Psychiatry, vol I: People and Ideas, edited by W.F. Bynum, Roy Porter, and Michael Shepherd. New York and London, Tavistock Publications (New York, Methuen), 1985, 304 pp., \$70.00 for both volumes.

The Anatomy of Madness: Essays in the History of Psychiatry, vol II: Institutions and Society, edited by W.F. Bynum, Roy Porter, and Michael Shepherd. New York and London, Tavistock Publications (New York, Methuen), 1985, 283 pp., \$70.00 for both volumes.

"Our aim . . . in planning these twin volumes," writes Dr. Shepherd in his introduction in volume I, "has been to marshal a wide-ranging body of unpublished research-indepth covering key topics in the history of 'madhouses, mad-doctors and madmen.' "Derived mostly from seminars held in London at the Wellcome Institute for the History of Medicine during 1982–1983, these 23 collected essays "offer a kind of dispatch from the front, reporting on many of the key areas where enquiry—empirical and conceptual—is currently progressing."

I am somewhat daunted by the task of providing a critical review of these two estimable volumes, since Dr. Shepherd has already admirably done the job for me in his introduction. Written from the vantage point of his wide knowledge and profound understanding of matters historical, his chapter is in many ways the set piece of the collection and puts in clarifying perspective the kaleidoscopic facts and ideas tumbled forth by his panel of contributors. I shall content myself, therefore, with a reflection or two stimulated by these remarkably readable and provocative essays.

As I initially opened these attractively crafted volumes, "like stout Cortez...silent, upon a peak in Darien," I experienced an exciting sense of the discovery of the new world they exposed to view in the panorama of psychiatric history stretching back over two centuries and more. Before me (to mention only a few features of the landscape) were the emergence of the asylum in England and on the Continent, the rise and fall of moral treatment, the clinical problems posed by pauper lunatics in nineteenth-century England, Samuel Johnson's melancholy, John Conolly's advocacy of "non-restraint," and psychiatric testimony in a lurid murder trial in fin de siècle Paris.

It is eminently clear, not only from the individual papers themselves but equally from the voluminous notes appended to each, that a whole new historical discipline has arisen during the past decade or two. The history of psychiatry can no longer be viewed as the plaything of retired clinicians flirting with the early stages of dementia of the Alzheimer type but the serious pursuit of a growing number of professional historians. While most of us have, as clinicians, been engaged in patient care, teaching, and research, or have been worrying about departmental budgets and sitting on innumerable committees of dubious value, this swelling band of historical scholars has been probing our past, uncovering our origins, and more often than not discovering that the seemingly novel problems and issues and arguments which divide us today were debated equally spiritedly by our forebears a century or more ago.

Furthermore, as Dr. Shepherd comments in his introduction, modern historians have disclosed a "Whiggishness" in their predecessors—a readiness, that is, to distort the past by viewing it through the bias of a naive credence in "progress." More than half a century ago Butterfield (1) spotted this endemic disease of historical scholars and characterized "the Whig interpretation of history" as that "tendency in many historians to write on the side of Protestants and Whigs, to praise revolutions provided they have been successful, to emphasize certain principles of progress in the past and to produce a story which is the ratification if not the glorification of the present." Historical figures, in other words, who anticipated the historian's liberal values were portrayed as "good guys" bravely struggling with the "bad guys" wickedly tossing grit in the wheels of progress. Such a narrow outlook, as Butterfield pointed out, precluded a balanced recognition and understanding of the rich complexity of the thinking of the protagonists on both sides of old arguments. It dangerously oversimplified the nature of historical process and blinded the Whiggish historian to the dialectic from which his own values and beliefs had emerged.

If recent studies of psychiatric history have exposed and eradicated the Whiggish bent of older writers, they have, nonetheless, not entirely escaped infection with the disorder in another of its protean manifestations. Our modern preoccupation with the evils of the control of deviance through social institutions interposes a new and distorting lens in the line of vision of observers of the past. It is a prominent theme in several of the papers in these volumes that the rise of the asylum during the nineteenth century was a reflection of the unspoken need to maintain the social status quo by "casting out" and incarcerating those whose deviant behavior was unpalatable, not to say threatening, to the Establishment. Within this view, the individual psychiatrist of history is seen as the unwitting pawn of the forces of social control. This is, indeed, an intriguing and provocative interpretation of psychiatry's not too distant past, but if adhered to too narrowly it blinds one to many important historical data. By dismissing the beliefs and practices of nineteenth-century psychiatrists, for instance, as merely a manifestation of Victorian suppression of deviancy, the historian shuts the door on the examination and elucidation of scientific theories about insanity and its treatment as earlier psychiatrists experienced them and thought about them. To prejudge our predecessors by modern values, whether Whiggish or otherwise, is to dim our vision and understanding of the past.

My comments should not be read as a condernation of the essays that grace the pages of these volumes, but as a suggestion that their view and interpretation of psychiatric history are often incomplete. Of the 24 contributing authors, only four (three psychiatrists and one psychiatric social worker) have apparently had any extensive clinical experience with psychiatric patients. The majority are professional historians, a number of them concerned primarily with the historical development of institutions and with portraying the asylum as a social instrument designed to isolate and control patients with mental illness in contravention of their individual basic rights. This historical bias is evident, for example, in Andrew Scull's chapter on the professional career of John Conolly, the one-time superintendent of the Hanwell Asylum. With a kind of Stracheyan cynicism, Scull seeks to topple the champion of nonrestraint from his minor niche in the Victorian pantheon through a portrayal of Conolly's self-serving motives for espousing the asylum treatment of the mentally ill-motives that were not only egotistical but, in Scull's view, in collusion with the efforts of Victorian society to exert control over socially undesirable

Clinical readers of this chapter, however, all too aware of the human devastation caused by mental illness, would be more liable to see Conolly as genuinely and altruistically concerned for his patients' welfare and to understand his enthusiasm for the asylum and nonrestraint as a scientific recognition of their effectiveness in treating mental illness. In exploring the history of Conolly's clinical activities they would seek to determine from his writings the origins of his scientific ideas, what they were, and how they arose within the intellectual context of his times.

Historians with a clinical background, in other words, guided by their predilection for studying the individual rather than the culture, would heed Collingwood's dictum (2) that the task of the historian lies in "penetrating to the inside of events and detecting the thought which they express." In so doing, they would complement and render less partial the observations and interpretations of more sociologically oriented historians. Thus broadened, the history of psychiatry will be in a better position to provide a less judgmental understanding of the conceptions of our predecessors about mental illness itself and of the social institutions and practices they created to deal with it. One can only hope that these important volumes will be widely read by clinical psychiatrists from residency training onward and will stimulate many more of them than are now so inclined to add their clinical and psychological insight to the study of the historical roots of our ideas about mental disorders.

REFERENCES

- 1. Butterfield H: The Whig Interpretation of History (1931). London, Bell, 1959, p v
- Collingwood RG: The Idea of History. Oxford, Oxford University Press, 1946, p 212

J.C.N.

Victorian Lunacy: Richard M. Bucke and the Practice of Late Nineteenth-Century Psychiatry, by S.E. Shortt. New York, Cambridge University Press, 1986, 207 pp., \$29.95.

Who was Richard M. Bucke? A Canadian psychiatrist (1837–1902) who was the 25th President of APA (1897–1898) and the author of Man's Moral Nature (1) and Cosmic Consciousness (2).

Bucke became superintendent of a Canadian asylum in 1876, when such positions had prestige in symbolizing public benevolence and in defining abnormal behavior. Over the next two decades the prestige of asylum superintendents declined as other medical specialties gained respect with their understanding of bacterial diseases and antiseptic techniques. Furthermore, a Darwinian conception became accepted that saw psychiatry as responsible only for "degenerates" from the ranks of poverty; psychiatry was not seen as having relevance to middle or upper classes.

In 1894, APA invited the neurologist Weir Mitchell to address its annual meeting. He said, "Your hospitals are not our hospitals... your ways are not our ways.... We commonly get as your contributions to science odd little statements... sandwiched among... farm balance sheets" (3). The response was a standing ovation. Psychiatry wanted scientific legitimacy.

Bucke reached for scientific legitimacy by adding surgery to treatment options. He tried operations in which a wire was inserted through the foreskin to cure "masturbatory insanity," based on the Victorian view that masturbation was a vice, a squandering of precious resources, and a corrupting loss of self-control. He used gynecological surgery for gynecological abnormalities to improve the mental health of his patients. As Maudsley (4) had pronounced, "The uterus and its appendages . . . not infrequently play an important part in the production of insanity." Bucke's specific surgical approaches were idiosyncratic and not adopted, but were consistent with a general contemporary interest in rejuvenating psychiatry with "scientific" treatments.

Even if psychiatry lacked treatments, psychiatry could gain prestige by adopting explanations that described mental illness physiologically. Each new physiological finding attracted etiological hypotheses, and by the 1870s much of the physiology of the sympathetic nervous system was established. Bucke used these developments to write *Man's Moral Nature* (1), in which he stated that the sympathetic nervous system was the physical basis of human morals.

By the turn of the century neither neurophysiology nor associational psychology offered satisfactory explanations of mental illness. There was a need for hypotheses that went beyond physiology and beyond associational psychology. Bucke offered Cosmic Consciousness, in which he hypothesized a "simple consciousness" shared with the advanced animal world that includes an awareness of the environment and one's body, a "self-consciousness" that separates us from other animals and allows us to engage in deliberate introspection, and a "cosmic consciousness" that is entirely spiritual. In reading Shortt's history of Bucke, one better understands how the stage was set for the acceptance of a person whose conceptions were beyond physiology, reached all economic classes, and offered some treatment potency: Freud.

REFERENCES

 Bucke RM: Man's Moral Nature: An Essay. New York, GP Putnam's Sons, 1879

- Bucke RM: Cosmic Consciousness (1901). Secaucus, NJ, Lyle Stuart, 1984
- Mitchell SW: Address before the fiftieth annual meeting of the American Medico-Psychological Association, held in Philadelphia, May 16, 1894. J Nerv Ment Dis 1894; 21:414–429
- Maudsley H: The Pathology of Mind. London, Macmillan, 1879, p 206

ROGER PEELE, M.D. Washington, D.C.

Anger: The Struggle for Emotional Control in America's History, by Carol Zisowitz Stearns and Peter N. Stearns. Chicago, University of Chicago Press, 1986, 295 pp., \$24.95.

The authors, a psychiatrist and a historian, have collaborated on a study that is, rather than a history of anger, a history of the "emotionology" of anger in the United States. The authors define this term as "the conventions and standards by which Americans evaluated anger, and the institutions they developed to reflect and encourage these standards."

Using as sources essentially popular literature—children's stories, Godey's magazine, the Ladies' Home Journal, marriage manuals, advice on child training, and the like—the Stearns outline changes in the attitudes toward anger from colonial times to the present.

Although wrath has long been recognized as one of the seven deadly sins, apparently little concern about it was shown in the seventeenth century. Breaking a child's will and enforcing obedience by children and social inferiors was considered more important than the feelings of children and servants. Greater disapproval of anger appeared in the eighteenth century, when the word "tantrums" was used pejoratively, usually in reference to inappropriate emotional behavior in adults.

Early in the nineteenth century, child-rearing manuals and publications giving advice on marriage appeared. Wifely duties included not only providing a peaceful haven for husbands buffeted by the annoyances of the working world but also training the children in anger control through example and discipline. After the Civil War, many authorities expressed approval of anger when it could be channeled into righteous causes. Children might be encouraged to direct anger into boxing or other competitive activities.

More recently, even though we claim to rebel against nineteenth-century restrictions and to approve emotional liberation, "letting it all hang out," we still try to achieve an anger-free society. This may correlate with a decline in moral indignation and diminished belief in an angry God and vengeful damnation. But many people still suffer guilt feelings for not suppressing their anger.

This book will probably be of more interest to social historians than to psychiatrists.

MARJORIE C. MEEHAN, M.D. Chicago, Ill.

The Nazi Doctors: Medical Killing and the Psychology of Genocide, by Robert Jay Lifton. New York, Basic Books, 1986, 543 pp., \$19.95.

In this book Robert Lifton does a remarkably capable job of investigating how physicians in Nazi Germany could be

co-opted into becoming instruments to help carry out the regime's genocidal plans. In doing so, he manages to avoid two major pitfalls. First, he resists the attempt to explain the actions of these physicians by totally denying their humanity (i.e., "demonizing" them). Second, he does not explain away their actions as what would be expected of anyone given the environment of the time.

The first part of the book describes the Nazi biomedical vision, how it led initially to mass sterilizations and later to direct killing of those considered "defective" (e.g., mental patients, Jews, gypsies). He describes both the processes of the regime to win over physicians to its beliefs and the resistance to this by a few members of the medical community.

The second part of the book describes the situation of physicians of Auschwitz. Especially interesting here are the detailed case histories of the Nazi doctors, which are given in great detail. These descriptions show how medical institutions and structures can be redirected away from healing aims. Psychiatrists will be interested in a description of how a Nazi doctor, resistant to taking part in the Auschwitz death machinery, was successfully "treated" by use of a psychological approach.

The third part of the book investigates the psychological processes whereby people who in another environment might have functioned normally adapted themselves to the Auschwitz environment. The key to this is the psychological process of "doubling," or creating a semiseparate psychological self capable of functioning in a manner at odds with the way the original self functions. Lifton points out that the psychological process of doubling tends to be present to some extent in most professional groups (e.g., doctors, lawyers, dentists).

An interesting subtheme of the book is that of pointing out the inability of logic to be helpful morally after immoral premises have been accepted. For example, once Aryan racial supremacy is accepted, the progression of action to murder follows a logical course. Similarly, once a physician accepts that he would stay at Auschwitz, the process of adaptation to the evil environment again follows a logical course. In our society, which is currently wrestling with the issue of when a physician should be allowed to terminate the life process, this book should be required reading for medical students.

JAMES REICH, M.D., M.P.H. Iowa City, Iowa

BIOGRAPHY AND AUTOBIOGRAPHY

The Fitzgeralds and the Kennedys: An American Saga, by Doris Kearns Goodwin. New York, Simon & Schuster, 1987, 1,008 pp., \$22.95.

He had cortisone stashed away in safety deposit boxes around the United States in case Jack might be in town and need it. He ordered a lobotomy for his daughter Rosemary without asking his wife first. He orchestrated a mighty political campaign to get his son elected President—without always consulting the son. He was Joseph P. Kennedy: banker, broker, ambassador, family man, womanizer, wheeler-dealer. He was an Irish-American original.

•This book is about two large Boston immigrant political families, but the centerpiece is Joe, the mayor's son-in-law, the President's father. Not a saint, not Satan either. Loving and brutal: a fascinating mix.

The book starts with the mid-nineteenth-century potato famine in Ireland, when the first Fitzgeralds and Kennedys immigrated to Boston. It ends with Jack Kennedy's inauguration in 1961. The rise and merging of the two families, a 100-year history of triumph and tragedy, is a marvelous story, well told in this rich and definitive biography.

It need never be told again, says John Kenneth Galbraith. He may be overoptimistic, since the Kennedys keep going into politics. No other biographer, however, will probably have the sources available to Doris Kearns Goodwin.

Wife of a Kennedy speech writer, she talked with Rose and almost everyone else in and out of the family except Jacqueline. After researching the book for 3 years, she got an unexpected windfall. Gathering dust in Hyannis Port attics were 150 cardboard boxes containing thousands of files. Over the years, it seems, the Kennedys had saved everything: dentist bills, report cards, papers regarding Joe's business dealings. (Was he or was he not a bootlegger in the early 1920s? The book does not say, so perhaps not everything was saved.)

Ted Kennedy and the family gave Mrs. Goodwin access to the files. She spent 3 more years organizing them and another 3 in the Concord, Mass., public library writing this book in longhand.

Given this background, *The Fitzgeralds and the Kennedys* could easily have been the "official" as well as definitive biography, meaning a whitewash. It is not a whitewash. The warts and wens are there. What warts, what wens!

There was Rose's father, Honey Fitz, the Boston mayor who sang "Sweet Adeline" at political rallies. He also sang on his best friend, landing the friend in jail. There were the boss politicians in both families, the illicit booze, the Wall Street scams, the cemetery votes, the hoarding of cortisone when it was in short supply.

Then there was the handsome Jack, lovable, coo', victim of three serious illnesses: Addison's disease (whence the cortisone), chronic back disease, and satyriasis. One might have been skeptical about the extent of Jack's sex life before reading this book but not after.

This is only part of the story, a small part. Jack Kennedy's endurance was enormous, his wit and charm enchanting, his courage admirable, and his intelligence a gleaming tribute to genes and a Harvard education. He was his father's creation, but only in part. Heredity and environment—the extraordinary Fitzgerald-Kennedy blend—combined in Jack to produce one of the most remarkable men in American history.

DONALD W. GOODWIN, M.D. Kansas City, Kan.

Schumann: The Inner Voices of a Musical Genius, by Peter Ostwald. Boston, Northeastern University Press, 1985, 355 pp., \$28.00.

One of the greatest Romantic composers was Robert Schumann, yet the details of his life are not as widely known as those of some of his contemporaries such as Mendelsohn, Chopin, and Wagner. This new biography sheds considerable light on the reasons for the relative obscurity of Schumann's life, providing details on the musician's strained and painful interpersonal interactions and the final denouement of his life in a mental hospital.

The author of this book is well suited to write a biography of Schumann. In addition to psychiatric training and a professorial rank in a distinguished department of psychia-

try, Dr. Ostwald is a violinist whose wife is a concert pianist. He has further availed himself of new source material for this biography, and these sources are abundantly present in the notes and references that document each chapter and add new insights into details of Schumann's life.

The author applies psychiatric interpretation at two levels in this biography. The first is a psychodynamic approach, which tries to read between the lines and extract the motivating forces behind Schumann's behavior. In this Dr. Ostwald for the most part comes up with plausible interpretations. The second is a more contemporary descriptive approach and applies DSM-III criteria to the recorded facts of Schumann's illness and life style to present a multiaxial diagnosis at the end of the book. The second approach unfortunately shows mainly the superficiality of purely descriptive schemata in explaining the life events and creativity of a musical genius.

The style of the book is very readable, and its organization maintains interest after a rather dramatic beginning that describes Schumann's suicide attempt by jumping into the Rhine river. My only wish is that Dr. Ostwald had presented more social information and background so that one could better understand how it was possible for such a gifted man to be sequestered in an asylum for months with almost no visits from his wife or other friends, until his death by starvation.

REMI J. CADORET, M.D. Iowa City, Iowa

Welcome, Silence: My Triumph Over Schizophrenia, by Carol S. North. New York, Simon & Schuster, 1987, 316 pp., \$17.95.

Dr. North's book describing her personal experience with schizophrenia and with those involved in treating her is both heartening and troubling. By describing an individual with severe and long-standing symptoms who fights her disability for many years and eventually succeeds in attaining her professional goal, we are given an important reminder: schizophrenia is not a diagnosis conferring hopelessness and an invariably poor prognosis. We hear that one-third, or more likely one-quarter, of those diagnosed as schizophrenic recover, but as clinicians (and especially clinical researchers), we rarely see such individuals. Unlike Alzheimer's disease with its relentless progressive deterioration, schizophrenia has a very wide range of course and outcome. The stigma resulting from having a mental illness in general, and one with an often exaggerated pessimistic prognosis in particular, was clearly a major obstacle that interfered with Dr. North's attempts to overcome her illness. It is good to be reminded that many people with schizophrenia can attain success in occupational and other important functional areas. It is also good to see how the extra efforts of one psychiatrist (identified as "Dr. Hemingway") made a difference in helping Dr. North during her illness.

A professional (psychiatrist, psychologist, social worker, nurse) reading this book, however, will also be made uncomfortable by the examples of inappropriate therapist behavior during the course of treatment. From the callous remarks and seeming lack of caring by apparently burnt-out staff members, to the breaches of confidentiality, to the hideous example of "parent-bashing" by a psychologist, there is much that should bother us in this book. I do not doubt that such situations harm our patients and our professions and do

hope that reminders such as these will push us to assure that we and our colleagues do not continue to commit such acts

Although the optimism over the positive outcome for this individual is heartening, most of the book is an extraordinary description of the horrible and profoundly destructive nature of schizophrenic symptoms. The dialogue at times sounds contrived, especially at the beginning, but the effect of perceptual distortions, command and other hallucinations, delusional thinking, and other symptoms is very clearly and dramatically portrayed. Such descriptions by those who have experienced them firsthand should go a long way toward putting to rest formerly fashionable notions that schizophrenia is a "growth experience" or that its symptoms are controllable by willpower or are a ploy for attention.

What troubles me most as a clinical researcher is the ending of the book, in which a spectacular and apparently lasting improvement occurs during a course of hemodialysis. Although the book briefly notes that several other schizophrenic patients were dialyzed, "all with only minimal or no success," in the protocol in which Dr. North participated, there is a problem of raising false hopes in this book. In fact, on the last page there is a completely erroneous paragraph that could produce a flood of desperate inquiries (and even potentially unscrupulous practitioners taking advantage of patients and families seeking a miracle cure). The misleading paragraph is as follows:

To date, no careful studies have been published that report dialysis to be conclusively effective as a treatment for schizophrenia, at least so far as I know. Only further research will determine why dialysis works for some schizophrenics and not others.

There have, in fact, been many rigorous scientific studies (1–3) showing no significant benefit from dialysis (which is also expensive and potentially dangerous) for patients with schizophrenia. Since this problem was not corrected before publication, readers of the *Journal* should be prepared to respond to numerous inquiries concerning dialysis and should refer to the articles referenced here, which show hemodialysis to be no better for schizophrenia than sham dialysis.

REFERENCES

- Schulz SC, van Kammen DP, Balow JE, et al: Dialysis in schizophrenia: a double-blind evaluation. Science 1981; 211:1066-1068
- Carpenter WT, Sadler JH, Light PD, et al: Therapeutic efficacy of hemodialysis in schizophrenia. N Engl J Med 1983; 308:669-675
- Schulman A, Wetterberg L, Asaba H, et al: Hemodialysis in chronic schizophrenics. Arch Gen Psychiatry 1984; 41:817– 819

DAVID SHORE, M.D. Rockville, Md.

Freud and His Father, by Marianne Krüll; translated by Arnold J. Pomerans. New York, W.W. Norton & Co., 1986, 286 pp., \$19.95.

This volume by a German sociologist, first published in German in 1979, attempts to explore why Freud gave up his seduction theory of the origin of neurosis in favor of the

theory of infantile sexuality. The author assumes that this was in error. True to her sociopolitical orientation, she says, "The entire Oedipus theory and all concepts and constructs based upon it . . . are mystifications that obscure the interhuman dimension, ignoring the role of the social environment in the socialization of man" (p. 212). To explain how Freud fell into error after having made a correct start, she reexamines Freud's early family life, using newer information from Peter Swales and Josef Sajner. Most of that story has been told before in many biographies, but this book may be of interest for giving the reader a detailed recounting of Freud's origins.

Most of the biographical material, however, is irrelevant to the author's main thesis: Freud's entire life can be understood as the enforced enactment of a taboo and a mandate from his father. The taboo was never to investigate his father's secrets, and the mandate was to become a great man to fulfill his father's desires. What is the evidence for this? Mostly, it turns on Krüll's attempt to analyze Freud's letters and dreams. The psychoanalysis of Freud is now a busy and productive industry, but the author's lack of psychodynamic talent and sophistication, as well as her easy slide from speculation to certitude, seriously mar this undertaking.

Krüll's core idea comes from a dream Freud had after his father's death, which she reinterprets:

This dream must have reminded Freud of an unspoken taboo Jacob [his father] had passed on to him in early childhood, namely, not to delve into his, Jacob's, past. I believe that the crisis in Freud's life which followed his father's death and lasted for nearly a year was the direct result of his wrestling with just that taboo. Several months later he found it was more than he could cope with, and he renounced his seduction theory. (p. 43)

I believe that from the moment of his son's birth, Jacob gave him the ambivalent mandate to expunge Jacob's guilt, rooted as it was in the past, but to refrain from uncovering its precise nature. (p. 99)

Throughout the rest of the book, this taboo and mandate are no longer hypotheses but facts from which far-reaching conclusions are drawn, including a full understanding of Freud's creation of psychoanalysis.

Krüll is very clear about what she thinks Freud should have done and has little difficulty correcting him:

In my view, Freud had developed a true psychoanalytical theory with his seduction theory—all he needed to do was to rid it of its extreme fixation on sexual seduction. Freud could easily have expanded his seduction theory into a "misguidance" theory: the child is misguided by his or her parents or primary caretakers and hence develops neurotic aberrations. That theory would, at one and the same time, have been a theory of "guidance" toward socially acceptable behavior. I believe that he missed this opportunity. (pp. 69–70)

She rather badly misses the point of psychoanalysis, preferring to omit the intrapsychic life. Freud began where Krüll leaves off, trying to understand why human beings cannot be understood as simple products of their education.

The book is riddled with sloppy deductions, speculations not recognized as such, misunderstandings of psychoanalytic propositions, wild analysis, gross oversimplications, and faulty logic. The author speaks of the mature Freud as if he were still merely a prisoner of his father's commands, failing to understand processes of internalization and secondary autonomy. She tries to understand Freud as solely the product of his experience (e.g., "The joint Bible readings seem to have pleased father and son alike.... It is not surprising that these joint Bible readings should have turned Sigmund into a bookworm, an intellectually curious young man, open to new ideas and full of enthusiasm for them" [p. 162]). Now we know how to raise our children. What about all the millions of children for whom joint Bible readings seemed to have no such outcome?

We should be grateful to the author for providing a ready source for some of the biographical data on early Freud and for demonstrating that sociology is an inadequate frame of reference for understanding a life and a creative work.

ARNOLD M. COOPER, M.D. New York, N.Y.

BOOKS FOR CHILDREN

Sometimes I'm Jealous, by Jane Werner Watson, Robert E. Switzer, and J. Cotter Hirschberg, M.D. New York, Crown Publishers, 1986, 27 pp., \$2.95 (paper).

Sometimes I Get Angry (1971), by Jane Werner Watson, Robert E. Switzer, and J. Cotter Hirschberg, M.D. New York, Crown Publishers, 1986, 22 pp., \$2.95 (paper).

Sometimes I'm Afraid (1971), by Jane Werner Watson, Robert E. Switzer, and J. Cotter Hirschberg, M.D. New York, Crown Publishers, 1986, 26 pp., \$2.95 (paper).

Sometimes I'm Jealous is a Read-Together Book for Parents and Children created in cooperation with the Menninger Foundation for solving problems of childhood. This book deals with a young child's feelings, thoughts, and behaviors when a new baby joins the family. The book is simply written with pleasant brown-and-white illustrations (by Irene Trivas). It is designed to be read with the child before and after a new sibling comes. Two of the authors are child psychiatrists and clearly recognize the kinds of feelings children experience at the time of this developmental crisis. They also recognize that the birth of a sibling is a time for growth and development. A book of this sort will be popular with concerned parents who want to prepare and help their child understand a new baby. I wish it were possible for psychiatrist authors of children's books to be able to recreate verbally some of the more colorful fantasies that normal children share about the birth of a newborn. This is the mystery and wonder of a childish imagination.

Sometimes I Get Angry is another book in the same series created in cooperation with the Menninger Foundation. It too is a book for children to read with their parents and for parents and children to talk about together. This book is written in rhyme with illustrations that are similar to others in the series (also by Irene Trivas). However, the color scheme is blue and black. The introductory note to parents is very helpful and conveys the child's needs for dependence and autonomy in words that parents can understand and identify with. The language in this book is more suited to a young child than is the language of the other two, and the young child may be intrigued by the rhymes. The illustra-

tions capture the spirit and liveliness of a 3-year-old child while he copes with normal developmental tasks,

Sometimes I'm Afraid is the third book in the series. This book is similar to the two previous books. It is designed for a 3-year-old. It identifies and acknowledges the normal fears that a 3-year-old experiences. It makes no attempt to interpret them. It simply tells a story with a happy ending. A child who is scared simply says, "Mommy and Daddy understand how it feels to be afraid sometimes. Knowing they love me and are there takes away my fear and makes me feel good and safe."

All three of these books will be very useful for parents and children. Children may, in fact, use them as transitional objects. They may carry the books to school, to the doctor's, or to the hospital; memorize the words; and tuck them under their pillows at night. The best advertisement for this series of books is a more personal one. I read them with several very young children who found them interesting, enlightening, and absorbing; they listened with wide eyes and open minds and shared their experiences of fear, anger, and reactions to new babies.

ELISSA P. BENEDEK, M.D. Ann Arbor, Mich.

PERSONALITY AND SOCIETY

The Impact of Illness on World Leaders, by Bert Edward Park, M.D. Philadelphia, University of Pennsylvania Press, 1986, 353 pp., \$24.95.

Was Woodrow Wilson a rigid moralist or simply a victim of multi-infarct dementia? Was Adolph Hitler an evil genius or a sufferer of temporal lobe epilepsy? These and other questions are explored in this often titillating and frankly disturbing book about the physical and mental health of many of our most famous (and infamous) world leaders during this century.

In a liberally referenced account, Dr. Park makes the case that, popular images aside, many of our best-known world leaders suffered from severe illnesses that affected not only their physical and mental health but their political judgment and policies as well. Dr. Park carefully traces the evolution of different leaders' disorders, using firsthand accounts and archival information and correlating this with their public record. Woodrow Wilson, for example, was hypertensive from an early age and suffered many lacunar strokes that over a period of time affected his personality, behavior, and intellect. The result of these strokes was an exaggeration of Wilson's underlying personality characteristics, leading to his image as a rigid moralist. Dr. Park believes that this was simply a manifestation of an organic brain syndrome. Apparently, changes in Wilson's character became more pronounced during the latter portion of his presidency, particularly after a devastating stroke in 1919 that left him physically incapacitated. Surprisingly, his personal physician made a plea for Wilson not to resign, fearing that to remove the disabled President from the White House would "emotionally disturb him and might prove fatal." Wilson's disability was deliberately kept from the public through a virtual conspiracy by his doctor, wife, and close associates. Wilson progressively became more isolated and dependent and was described as being "incapable of assimilating data when it was presented to him." But it was the increasing inflexibility of character that led to Wilson's greatest legislative defeat, the Senate's rejection of the League of Nations.

Other leaders' medical histories are equally disturbing. Hitler is shown to have benefited from the senility of three European leaders during his rise to power in the 1930s—Paul von Hindenberg of Germany, Ramsey McDonald of Great Britain, and Jozef Pilsudski of Poland. Hitler himself, according to Park, suffered from four conditions that led to his physical deterioration during the last years of the Third Reich. Evidence indicates that Hitler suffered from Parkinson's disease, chronic cholecystitis with acute exacerbations, polypharmacy, and temporal lobe epilepsy. The last diagnosis is the least convincing of the four, and many of the symptoms Hitler experienced prompting Park's diagnosis are easily explained by polypharmacy. Among the medications Hitler received for his myriad complaints were oxycodone (Eukodal) (a synthetic opiate analogue) and moxaverine (Eupaverin) (an antispasmotic and anticonvulsant), both taken in combination for relief of abdominal pain; antigas pills containing strychnine and belladonna (up to 16 pills per day); pentylenetetrazole (Cardiazol) to "stimulate the circulatory center of the brain and improve circulation [in Hitler's '; and Vitamultin tablets, which contained methamphetamine (Pervitin) and caffeine. During his last year Hitler also received frequent intranasal cocaine and synephrine (Sympathol) (a catecholamine) for a sinus condition. Clearly, any person given this astonishing quantity of psychoactive medications might conceivably develop mental disturbances, including the mood lability and paranoia attributed to Hitler. It is also disturbing that Theodor Morell, Hitler's personal physician, who was poorly qualified and considered a quack by many of his contemporaries, had the responsibility of caring for a world leader. As late as 1944 Hitler was to salute his physician: "My dear doctor, I am pleased and happy that I have you."

I have several minor criticisms. Dr. Park is not a psychiatrist, and this is often evident in his handling of psychiatric explanations and terminology. For example, Ramsey McDonald is described as suffering from depression, which Dr. Park explains was partly endogenous (personality based) and partly reactive (responsive to environmental stimuli). The endogenous/reactive dichotomy is an area of ongoing research and debate. Most experts, however, would probably agree that a personality-derived depression is more reactive than an endogenous depression to environmental stimuli. Several of the leaders are described as suffering from dementia, which Dr. Park redefines in the respective chapters. A table including the criteria for dementia might have been useful and may have avoided the need to repeat the definition.

Although one may quibble about Dr. Park's diagnostic assessments, they are all reasonable on the basis of available data. Dr. Park has done his homework, and the result is fascinating and readable. The book is written for lay audiences and includes graphics to illustrate concepts such as lacunar infarcts, the vascular supply of the brain, and cortical atrophy as seen in Alzheimer's disease. Although physicians are familiar with these concepts, the graphics will be helpful to the lay person.

The value of the book lies in its disquieting conclusion that many of our most famous world leaders have been mentally and physically ill and that these impairments may have had a direct impact on public policy. Furthermore, and equally disturbing, most of these disabilities were covered up by friends and associates more concerned with protecting the leader than in serving the best interests of their country. In an age when nuclear weapons are widespread and easily acces-

sible, it is alarming to think that many of today's most important decisions may be in the hands of mentally impaired persons. One wonders how some of our present leaders might fare in Park's analysis.

DONALD W. BLACK, M.D. Iowa City, Iowa

Nobel Prize Conversations, edited by Sir John Eccles, Roger Sperry, Ilya Prigogine, and Brian Josephson. Dallas, Saybrook Publishing Co. (New York, W.W. Norton & Co., distributor), 1985, 210 pp., \$15.95.

Persuading experts from various areas of scientific research to expound at some length on the fundamental questions of our time is not without hazard. The result, more often than not, is a mélange of what Aldous Huxley called "specialized meaninglessness," as scientists who have devoted a lifetime to the narrow contemplation of a minute aspect of reality become intoxicated by the flattering invitation to lift their gaze and consider such fundamental questions as the existence of a deity or the meaning of life. This particular collection of conversations would appear particularly prone to such a hazard. All four of the editors are Nobel laureates. Dr. Brian Josephson's research into tunneling phenomena in solids earned him the physics prize in 1978. Sir John Eccles's discoveries concerning the electrical changes within nerve cells resulted in the 1963 physiology or medicine prize. Roger Sperry's studies of the differing and overlapping functions of the two hemispheres of the brain won the same prize in 1981. Ilya Prigogine won the 1977 prize for chemistry.

The laureates gathered at the Isthmus Institute of Dallas in 1982. Their brief was to apply their formidable intellects to the awesome issues of the relationship between mind and body and materialist science's apparent failure to provide an accurate account of the complex relationship between our evolving human species and a time-irreversible universe.

The three main participants were Josephson, Eccles, and Sperry. It is a tribute to the clarity of their thinking and the vigorousness of their exchanges that in fact this book is such a splendidly enjoyable and provocative read. It is helped in no small measure by a characteristically daring commentary by Saturday Review editor Norman Cousins that simultaneously stitches the conversations together and attempts a synthesis between the scientific speculations of the participants and the poetic insights of such artists as Walt Whitman, Wallace Stevens, Emily Dickinson, T.S. Eliot, and Rainer Maria Rilke. The only doubtful element in the collection is an abstruse essay on the nature of time by Prigogine, written specially for the Institute and not a subject of the discussions.

The opening position adopted by the three experts departs radically from the popular view within and outside of medicine, which portrays the human brain as basically a self-regulating computer and the mind as little more than an aftereffect produced to pacify philosophers, theologians, and a few woolly psychiatrists. Sperry, expounding on the ideas contained in his book *Science and Moral Priority* (1), contests the view of mind as something pushed around by the brain's activity at the subnuclear, molecular, cellular, or circuitry levels. The mind, he insists, exerts causal control by choosing, commanding, and willing over the brain's function. At this particular moment in our human evolution, it may well make more sense to say that the mind "causes" the

brain than to say that the brain causes the mind. Within such a model, the events of inner experience, as emergent properties of brain processes, become themselves explanatory causal constructs in their own right, interacting at their own level with their own laws and dynamics. "The whole world of inner experience," declares Sperry, "long rejected by twentieth century scientific materialism, thus becomes recognized and included within the domain of science."

Just when scientists thought they had the structure and the function of the universe worked out through the laws of atomic chemistry and quantum physics, dissident outriders began to suspect a wrong turn had been made. "The trajectories through time and space of most of the atoms on our planet," argues Sperry, "are not determined primarily by atomic or subatomic laws and forces, as quantum physics would have it, but rather are determined by the 'aws and forces of chemistry, of biology, of geology, of meteorology, of psychology, even sociology, politics and like." Eccles concurs, insisting that despite the insuperable difficulty of having a nonmaterial mind act on a material brain, it has been demonstrated to occur in as simple an operation as the decision to lift a cup from its saucer. "No doubt," he adds mischievously, "to the great discomfiture of all materialists and physicalists."

Brian Josephson goes further, however, and proposes that the inclusion of God or some form of supreme intelligence or "Mind" in science is not only plausible but may even be necessary if science is ever fully to understand nature, ever to lift its eyes from the simple phenomena, those which are more easily connected with fundamental laws, and gaze instead at the truly complex questions of our time. For example, he argues, the question of how man came into existence is assumed to be a problem that will be solved in the future without involving any higher being. It might make better sense if scientists took God or Mind into account in science and asked what would a science look like that had God playing a part and accounting thereby for particular phenomena. It is not a position that appeals to Sperry, and the subsequent discussion is as exuberantly combative as it is regrettably brief.

The discussion concludes with Eccles mounting a rather woolly defense of freedom and responsibility, Sperry pondering the future relationship between science and the humanities, and Josephson, the most radical of the triumvirate, proposing a science of mysticism for which a mathematical basis might be established. Newton at least would have approved.

REFERENCE

 Sperry R: Science and Moral Priority. New York, Columbia University Press, 1983

ANTHONY W. CLARE, M.D. Londo.1, England

Social Origins of Distress and Disease: Depression, Neurasthenia, and Pain in Modern China, by Arthur Kleinman. New Haven, Yale University Press, 1986, 256 pp., \$22.00.

It was a pleasure to read this book and to be permitted to review it. This volume is a research study and a description of psychiatry in China. Those of us who have done research in China will find the introductory material on psychiatry in China of historical interest and appreciate its description of

BOOK FORUM

the historical trends relating to diagnostic considerations in China. Thus, the first three chapters and prologue review psychiatry in China and the concepts of neurasthenia, depression, and somatization.

The next two chapters specifically refer to the research study performed by Dr. Kleinman during two trips to China in 1980 and 1983. In these studies, he interviewed a number of patients, using structured instruments, and determined psychiatric diagnoses according to DSM-III criteria. Unfortunately, his concept of diagnosis does not seem to include a primary-secondary classification, which might have been helpful because he lists multiple diagnoses for the subjects interviewed. Further, the high rate of depression observed in these subjects may reflect cases of both primary and secondary mood disorders. The instrument used, the Schedule for Affective Disorders and Schizophrenia (SADS), does not adequately allow for a description of Briquet's syndrome or

sociopathy, two disorders that might have relevance to somatization and pain complaints. Given the methodological problems inherent in the design, however, the research is a commendable effort involving 100 patients who were directly interviewed, many of whom were later followed up.

The next two chapters involve illustrative case examples and case histories and, finally, a description of disease in Chinese psychiatry as a cross-cultural issue. The volume is well referenced and footnoted, and tables illustrating the research are adequate.

The book is extremely well written. Dr. Kleinman has been a student of psychiatry in China for several years and combines his writing ability, research interest in psychiatry, and anthropological interests into a well-written volume.

DAVID L. DUNNER, M.D. Seattle, Wash.

Reprints of Book Forum reviews are not available.

Natural Killer Cell Activity in Major Depression

SIR: Depressed patients have a decreased lymphocyte response to mitogenic stimulation (1), a decreased ratio of T suppressor to T helper cells (2), and a decreased β-adrenergic lymphocyte receptor sensitivity (3). To our knowledge, no one has studied natural killer cell activity in depression, although it has been reported to be decreased in stressed college students and inversely correlated with severity of depression in bereaved women (but not different in those women than in normal control subjects).

Natural killer cells are a subpopulation of lymphocytes that express in vitro cytotoxicity against a number of tumor and virus-infected cells. In addition, they appear to be involved in regulation of antibody production. Natural killer cell activity is affected by central catecholamine activity and by endorphins. Because of the clinical and epidemiological (4) evidence for a possible association between depression and cancer, we investigated a possible relationship between

depression and natural killer cell activity. We studied 10 patients hospitalized for primary unipolar (N=6) or bipolar (N=4) major depressive disorder, diagnosed according to the Research Diagnostic Criteria, who were free of major medical illnesses and other psychiatric disorders. The patients were maintained on a low vanillylmandelic acid and low calcium diet. We rated severity with a combination of scores from the Schedule for Affective Disorders and Schizophrenia (SADS) depression factor, the Global Assessment Scale, and the SADS impairment item. After the patients had been drug free for 2 weeks, we drew 15 cc of blood in preservative-free heparin and measured natural killer cell activity. We obtained peripheral blood mononuclear cells from heparinized venous blood by Ficoll-Hypaque density gradient centrifugation. Cells from the interface were isolated and washed, and natural killer cell activity was assessed against K562, a myelogenous leukemia cell line, in a standard 3-hour chromium-release assay (5). The effector cells were mixed with labeled target cells in varying concentrations to give effector/target ratios of 20:1, 10:1, and 5:1. We tested triplicate samples for each ratio. The supernatants were withdrawn after a 3-hour incubation and were counted in a gamma counter. Incubation of target cells with medium or saponin determined spontaneous and maximum release. The percent cytotoxicity was calculated according to the following formula (cpm=counts per minute):

% cytotoxicity= (cpm effector cells – cpm spontaneous release)
(cpm maximum release – cpm spontaneous release)

Each time we drew and tested blood from an experimental subject, we drew and tested a laboratory control sample from a technician or staff member on the same day. The control subjects were matched to the patients for sex but not age, since natural killer cell activity is stable from adolescence until the 60s. This characteristic tends to be stable over time in a given individual but to have a wide normal range.

Both patients and control subjects demonstrated a wide

range of natural killer cell activity (patients, 7.2%–55.2% cytotoxicity at 20:1; control subjects, 28.5%–70.3%). Both showed an appropriate change in activity level across effector/target ratios. At the 20:1 ratio the activity for the patient group (mean±SD=35.9%±18.0% cytotoxicity) was lower than for the control group (mean±SD=50.1%±13.8% cytotoxicity) by two-tailed t test (t=-2.0, df=9, p=.06) and by paired-sign test (p=.04). Only one patient had higher natural killer cell activity than his control. This difference was unrelated to the severity and symptoms of depression. Two bipolar patients and one unipolar patient had substantially lower natural killer cell activity than any of the control subjects (7.2%, 9.9%, and 20.1% cytotoxicity, well below the normal range).

These findings suggest that natural killer cell act vity may be decreased in major depression. This may be a small effect in many patients, a large effect in a subset of patients, or a finding primarily in bipolar patients.

REFERENCES

- Schleifer S, Keller S, Meyerson A, et al: Lymphocyte function in major depressive disorder. Arch Gen Psychiatry 1984; 33: 1039–1044
- Irwin M, Daniels M, Weiner H, et al: Depression and changes in T cell populations. Psychosom Med 1986; 48:303–304
- 3. Mann JJ, Brown RP, Halper JP, et al: Reduced sensitivity of lymphocyte beta-adrenergic receptors in patients with endogenous depression and psychomotor agitation. N Engl J Med 1985; 313:715–720
- Shekelle RB, Raynor WJ, Ostfeld AM, et al: Psychological depression and 17-year risk of death from cancer. Psychosom Med 1981; 43:117–125
- 5. Seaman WE, Gindhart TD, Blackman MA, et al: Natural killing of tumor cells by human peripheral blood cells: suppression of killing in vitro by tumor-promoting phorbol diesters. J Clin Invest 1981; 67:1324–1333

PAUL C. MOHL, M.D. LENA HUANG, M.D. CHARLES BOWDEN, M.D. MICHAEL FISCHBACH, M.D. KENNETH VOGTSBERGER, M.D. NORMAN TA'LAL, M.D. San Antonio, Tex.

Treatment of Rapid Cycling Bipolar Patients

SIR: I wish to share with readers of the Journal a method for treating rapid cycling bipolar patients. The technique, developed by trial and error, has been reliable; it has achieved mood control in more than two dozen patients admitted to our hospital. It should be attempted only on an inpatient basis.

Rapid cycling bipolar patients have historically been among the most difficult to treat. According to the literature, any patient having four or more episodes of maria and/or depression in 1 year qualifies for this diagnosis. Clinically,

these patients often have much more frequent cycling; some switch from irritable hypomania to depression and back several times in a week. The method we developed, which usually achieves rapid mood control, is as follows.

- 1. Start the patient on lithium tablets, 450 mg b.i.d., or 300-mg capsules t.i.d. with meals.
- 2. At the same time start L-thyroxine, 0.1 mg/day in the
- 3. Wait 3 days, then start carbamazepine, 200 mg at breakfast and 400 mg at bedtime. After 3 days, increase the dose to 200 mg b.i.d. and 400 mg at bedtime.
- 4. Tailor the doses of lithium and carbamazepine until the patient is free of side effects. This may require some reduction in the dose of each drug.
- 5. Add phenelzine, 15 mg b.i.d. at breakfast and lunch. If the patient becomes hypomanic, reduce the phenelzine to 15 mg/day. If the patient is intolerant to phenelzine, use isocarboxazid, 10-30 mg/day. Do not use tranylcypromine.
- 6. If the patient becomes agitated or restless or has psychotic symptoms, add a small dose of neuroleptic, such as thioridazine, 25-50 mg at bedtime. This medication can usually be discontinued after 2 weeks.

Dietary and ancillary medication restrictions must be carefully adhered to. Patients should be counseled about the importance of establishing rational daily routines for eating, sleeping, exercising, and working. After discharge, brief office visits facilitate monitoring of side effects and compliance with treatment. These visits should be offered weekly for the first month and monthly thereafter. A CBC must be done monthly, and periodic serum lithium levels should be ascertained. Most patients can tolerate this combination of drugs without difficulty; it is quite safe provided reasonable precautions are exercised. Long-term maintenance will probably be necessary.

> ARNOLD L. LIEBER, M.D. Miami Beach, Fla.

Mania Precipitated by Fluoxetine

SIR: Several cases of mania precipitated by the selective serotonin reuptake blocker fluoxetine have been reported in the Journal (1–3). I report here two more cases (one of mixed state and one of hypomania). Hospitalization was required for one of the patients. In both cases, symptoms resolved spontaneously within days when the dose of fluoxetine was lowered or discontinued.

Mr. A, a 47-year-old executive, presented with complaints of depression that had lasted for 4 weeks. He met the DSM-III criteria for major depression, with a history of cyclothymia, but had never been manic. His family history was positive for affective disorder, apparently cyclothymia. The results of a dexamethasone suppression test were normal, and his T₃ and T₄ levels were also normal; his TSH concentration was slightly elevated. He had not responded previously to treatment with doxepin, trazodone, and maprotiline given in what should have been adequate doses for adequate periods of time.

Because of his history of cyclothymia, Mr. A was initially treated with lithium carbonate, 1200 mg/day, which modulated his mood swings, but his residual mood was still dysphoric according to him and depressed according to objective assessment. When given fluoxetine, 20 mg/ day, he achieved remission in 4 weeks. After 2 more weeks

at a dose of 40 mg/day, he demonstrated rapid, loud, pressured speech, elevated mood, decreased need for sleep, more energy than usual, physical restlessness, irritability, and mild grandiosity. Subjectively, he experienced his mood as "the best ever." When the dose of fluoxetine was reduced to 20 mg/day, mild dysphoria returned. An alternating 20- and 40-mg daily dose resulted in alternate daily cycling. Mr. A is presently euthymic at a dose of 30 mg/ day.

Ms. B, a 26-year-old student, complained that she had had dysthymia since adolescence. She did not have a history of cyclothymia or bipolar illness. However, an older sister who had major depression with seasonal variation had been treated at our center with fluoxetine, 80 mg/day, without adverse effect. Ms. B began fluoxetine treatment after she experienced extreme depression. Treatment with fluoxetine, 40 mg/day, for 4 weeks restored her mood to nearly normal but resulted in trembling, so the dose was decreased to 20 mg/day. After depression returned, she was again given the 40-mg/day dose. At 22 weeks she experienced symptoms of physical restlessness, pressure of speech, flight of ideas, decreased need for sleep, distractibility, reckless driving, dysphoria, giggling, and crying (bipolar disorder with mixed state). Hospitalization was required. During her hospital stay, Ms. B made a rapid recovery to normal mood within 5 days after she stopped taking fluoxetine. When, after 1 month, depression returned, she was prescribed 10 mg/day of fluoxetine. Depression returns when she forgets to take this dose of medication for several days.

In Mr. A, cycling was evident before treatment, but in the case of Ms. B, no premedication cycling was reported. Although fluoxetine has a long half-life (36 hours), in both cases the patient's mood rapidly returned to normal after discontinuation of fluoxetine. Mr. A demonstrated a rapid response after both decrease and increase of the dose. The switch effect has been described as an antidepressantprecipitated mania or hypomania in patients whose illness is initially thought to be unipolar (4). It is now established that mania can occur during treatment with fluoxetine. Although it is unclear whether this switch is induced or coincidental, investigators should be aware of its potential occurrence.

REFERENCES

- 1. Settle C Jr, Settle GP: A case of mania associated with fluoxetine. Am J Psychiatry 1984; 141:280–281

 2. Turner SM, Rolf G, Beidel DC, et al: A second case of mania
- associated with fluoxetine (letter). Am J Psychiatry 1985; 142: 274-275
- Chouinard G, Steiner W: A case of mania induced by high-dose
- fluoxetine treatment (letter). Am J Psychiatry 1986; 143:686 4. Bunney WE Jr, Goodwin FK, Murphy DL, et al: The switch process in manic depressive illness, II: relationship to catecholamines, REM sleep, and drugs. Arch Gen Psychiatry 1974; 27: 304-309

BRECK LEBEGUE, M.D. Salt Lake City, Utah

Understanding the Meaning of a Symptom

SIR: The current emphasis on symptom checklists and diagnostic questionnaires has, in our experience, resulted in decreased attention on the part of psychiatrists and ward staff to the meaning of bizarre behaviors. The following vignette demonstrates the value of understanding why a psychotic patient acted so strangely.

Mr. A, a 29-year-old black college-educated engineer, was brought to our hospital by the police because he was frightening customers in a local restaurant by barking at them. When he was admitted, we discovered that he had a history of bipolar disorder, manic type, and that he had decreased the dose of lithium he had been taking. Results of a physical examination were unremarkable except for the discovery of a Greek letter branded on the patient's left arm and on his chest. It was impossible to make any sense of his rambling speech, and his barking was quite threatening to the other patients. Staff members tended to take Mr. A's strange symptoms at face value, i.e., as an unintelligible manifestation of psychosis, but their discomfort was evidenced by nervous, lighthearted comments about the patient "who barks like a dog."

Our efforts to make sense of the bizarre symptoms were facilitated by a medical student who recognized the patient's brand marks as an indication of membership in a college fraternity (although branding is officially discouraged by the national leadership). Further inquiry revealed that members of the chapter of the fraternity that Mr. A attended had developed a unique method of signaling a need for help, namely, barking. Upon hearing the signal, fraternity members are supposed to rush to the aid of a brother in distress. Thus, our patient's frightening symptom was a bark for help. This revelation eased the atmosphere on the ward and facilitated the patient's recovery. Sometimes it really does help to understand the meaning of a symptom.

THOMAS D. EPPRIGHT, M.D. ARMANDO R. FAVAZZA, M.D. Columbia, Mo.

Koro in an American Man

SIR: We report a case of koro in a black male schizophrenic patient who has had no contact with Asian culture.

Mr. A, a 35-year-old black man, was admitted to a hospital for the sixth time. He stated to the admitting physician that he "had the largest penis in the world." At the time of admission he was uncooperative during examination, but his mental state was consistent with his previous diagnosis of schizophrenia with unusual thoughts; for example, he said that strings tied around his wrist were there to "make my hands small like a young lady's love." After examination he was placed on a regimen of oral haloperidol. Several days after admission he was seen on an emergency basis following an unprovoked assault on another patient; he was in a state of severe anxiety. He stated that he was "being turned into a bitch" and had tied a cloth ligature around the base of his penis to prevent its retraction. This was removed without injury. He continued to have delusions of sexual change; after a second assault he was rapidly treated with neuroleptics and made good symptomatic improvement. The specific delusions of sexual change had not been present during previous admissions, but they did recur later on an open ward when he had not taken his

medication; they were again associated with assaultive behavior and responded to rapid treatment with neuroleptics.

Koro has three cardinal symptoms: first, delusions of retraction of the penis and the belief that this will lead to death; second, intense panic with physical signs of anxiety; and, third, the use of mechanical means to prevent penile retraction. Koro is most commonly a culture-bound psychogenic syndrome that occurs in Chinese men; it has been reviewed elsewhere (1). Sixteen cases of koro that occurred in non-Chinese subjects were reviewed by Berrios and Morley (2). In most of those cases, the syndrome was incomplete as defined by the three cardinal criteria. Three of those cases were in association with schizophrenia. Five other cases have been reported (3) since that review. It is surprising that so few of the reported cases have resulted in severe genital injury. Although genital self-mutilation is rare, Grielsheimer and Groves (4), in their review, reported on 53 cases of male genital self-mutilation in which 51% of the patients were schizophrenic, 19% were depressed, 17% had organic syndromes, and 13% had character disorders.

The relationship among delusions of sexual change, koro, and genital self-mutilation is unclear. Our case is reported to illustrate the serious nature of koro when it occurs along with acute psychosis and the need to intervene to prevent severe injury.

REFERENCES

- Rubin T: Koro (shook-yang): a culture bound psychogenic syndrome, in Extraordinary Disorders of Human Behavior. Edited by Freidmann TT, Faguet RA. New York, Plenum, 1982
- 2. Berrios GE, Morley SJ: Koro-like symptom in a non-Chinese subject. Br J Psychiatry 1984;145:331-334
- Kumar HV: Koro in an Israeli man (letter). Br J Psychiatry 1987; 150:133
- Grielsheimer H, Groves JE: Male genital self-mutilation. Arch Gen Psychiatry 1976; 36:441

 –446

EDWARD M. KENDALL, M.D. PETER L. JENKINS, M.R.C. PSYCH. Columbia, S.C.

Problem Solving and Creativity During Sleep

SIR: S. Weir Mitchell (1829–1914), the distinguished neuropsychiatrist, wrote classic works on nerve injuries. His name is associated with the rest cure and his descriptions of causalgia, reflex paralysis, erythromelalgia, and postparalytic chorea. Mitchell was also a novelist, short story writer, and poet. In one of his novels, When All the Woods Are Green, a character says, "I was guessing a riddle, but I took it into my sleep unanswered." Another responds, "A good many riddles have been answered in sleep" (1).

Josephine Tey commented in one of her novels, To Love and Be Wise, when referring to her protagonist, Detective Inspector Alan Grant of Scotland Yard, "In his school days Grant had learned that if he was stumped by a problem it paid to leave it alone for a while. A proposition that had seemed insoluble the night before was simple to the point of being obvious in the light of morning. This was a lesson that he learned for himself and consequently never forgot, and he took it with him both into his personal life and into his work" (2).

In the "Author's Definitive Edition" of The Complete

Poems, Mitchell published a three-stanza poem called "Florence" and four lines of verse titled "Which?". He supplied an informative footnote regarding "Florence": "Except the last two lines, which I failed to capture, the rest of these verses I composed while asleep. I have many times seemed to make verses in sleep; only thrice could I recall them on waking." He added, "The four lines called 'Which?" were also made in sleep. The psychological interest of this sleep product may excuse this personal statement" (3).

To illustrate Mitchell's claims, "Florence" is reprinted here in full; it is not offered with an implication of intrinsic merit, which is subject to the views and judgment of readers, but as representative of the aforementioned theme of creativity during sleep.

FLORENCE

April First

Come, let us be the willing fools Of April's earliest day, And dream we own all pleasant things The years have reft away.

'Tis but to take the poet's wand, A touch of here or there, And I have lost that ancient stoop, And you are young and fair.

Ah, no! The years that gave and took Have left with you and me The wisdom of the widening stream; Trust we the larger sea.

REFERENCES

- 1. Mitchell SW: When All the Woods Are Green (1894). New York, Century, 1905, p 128
- Tey J: To Love and Be Wise. New York, Washington Square
- Press, 1977, p 181
 3. Mitchell SW: The Complete Poems. New York, Century, 1914, p 376

JEROME M. SCHNECK, M.D. New York, N.Y.

Homosexuality in Patients With Borderline Personality Disorder

SIR: George S. Zubenko, M.D., Ph.D., and associates, in their article on sexual practices among patients with borderline personality disorder (1), reported rates of homosexuality as 57% in one sample of male borderline patients and 47% in a second series. The sample sizes were rather small in both cases: 21 in the first and 19 in the second. Thus, there is reason to question the representativeness of their samples, since the coexistence of these features may not be so dramatic in other, larger series of patients.

In my 10-22-year follow-up of 550 young hospitalized patients (2), there were 61 men and 144 women who met the DSM-III criteria for borderline personality disorder. Of the 61 men, six (9.8%) were exclusively homosexual when admitted (at an average age of 22 years) and have remained so. This figure is marginally higher than the figure cited in the Kinsey report (5.2%) and may not differ significantly from the rates relevant to American men of the same era (1963-1976). Among the 144 women with borderline personality disorder in my study, only two (1.4%) were and remain exclusively homosexual, a rate only one-eighth of that reported by Dr. Zubenko and his colleagues. The association between homosexuality and borderline personality disorder, if it exists at all, may be much weaker than is implied in their

Even if future studies with a larger number of subjects confirm a correlation, one must be cautious about speaking of the "rate of homosexuality in borderline patients." In some of my follow-up cases, for example, parents' extreme lack of acceptance of their offspring's homosexuality (as manifested by mockery, abusiveness, etc.) appeared to have predisposed to the development of some of the attributes (suicide gestures, inordinate anger, identity disturbance) by which borderline personality disorder is defined. In these families it would have been nearer the truth to claim not that many borderline patients become homosexual but that many homosexuals are (or were) reared in environments that fostered borderline personality disorder. This would render the correlation unsurprising.

REFERENCES

- 1. Zubenko GS, George AW, Soloff PH, et al: Sexual practices among patients with borderline personality disorder. Am J Psychiatry 1987; 144:748-752
- 2. Stone MH: Psychotherapy of borderline patients in the light of long-term follow-up. Bull Menninger Clin 1987; 51:231-247

MICHAEL H. STONE, M.D. White Plains, N.Y.

Dr. Zubenko Replies

SIR: Several important methodologic differences exist between our study of sexual practices among patients with borderline personality disorder and the observations of Dr. Stone. Our study sample consisted of outpatients or patients requiring brief hospitalization, and diagnoses were established according to currently accepted operationalized criteria. The 205 borderline patients described by Dr. Stone were identified from a cohort of 550 inpatients who were selected for "presumed amenability to analytically oriented psychotherapy" and who had a mean length of hospitalization of more than a year. Moreover, the diagnoses of these patients were made on the basis of clinical interviews that use older criteria which require inferences about transference issues and defensive style. While this subsample of 205 patients was said to meet the DSM-III criteria for borderline personality disorder, the reliability of such retrospective diagnoses is unclear. In his letter Dr. Stone uses a definition of homosexuality ("exclusively homosexual") that is clearly more restrictive than the one we used in our article ("entirely or almost entirely homosexual in their overt activities and reactions to individuals of the same or opposite sex, as determined by their scoring at least five of a possible six points on the homosexual-heterosexual rating scale of Kinsey et al."). Moreover, in his letter and in the publication he cites, Dr. Stone fails to provide estimates of the prevalence of homosexuality in patients with other psychiatric conditions or in a nonpsychiatric control group for comparison. These methodologic differences confound the comparison of the prevalence rates of homosexuality that we found and those of Dr. Stone. Conversely, it seems unlikely that significant differences between our study of 101 patients with

borderline personality disorder and Dr. Stone's experience with 205 subjects would have resulted from issues related to sample size, as he suggests.

It is interesting to compare the prevalence rates of exclusive homosexuality (Kinsey rating of 6) observed by Dr. Stone in his sample of patients to the age-specific prevalence rates of exclusive homosexuality in the general population as estimated by Kinsey et al. (1, 2). Six (9.8%) of the 61 male patients described by Dr. Stone were exclusively homosexual; the estimated corresponding rate in the general population was 2.9% (N=1,835). Thus, the rate of exclusive homosexuality among his male borderline patients was 3.4 times the rate in the general population (p=.01, Fisher's exact test). While his observed rate of exclusive homosexuality among female borderline patients was 1.4 times the rate in the general population (1.1%, N=2,824) as estimated by Kinsey et al. (2), this difference did not reach statistical significance. Therefore, Dr. Stone's own data support an association of homosexuality and borderline disorder, at least in men, in yet a third independent group of borderline patients.

It is difficult to know whether some reference in our article prompted the comments in the last paragraph of Dr. Stone's letter. While it is true, of course, that an association of two conditions does not imply a causal relationship between them, I can find no statement in our article which suggests that we misunderstand this fundamental point. Indeed, reasonable limitations in the interpretation of our study, including considerations of referral bias, were presented in our Discussion section.

REFERENCES

- 1. Kinsey AC, Pomeroy WB, Martin CE: Sexual Behavior in the
- Klisey AC, Fonieldy WB, Martin CE: Sexual Behavior in the Human Male. Philadelphia, WB Saunders, 1948
 Kinsey AC, Pomeroy WB, Martin CE, et al: Sexual Behavior in the Human Female. Philadelphia, WB Saunders, 1953

GEORGE S. ZUBENKO, M.D., PH.D. Pittsburgh, Pa.

Lidocaine Toxicity and the Limbic System

SIR: Stephen M. Saravay, M.D., and colleagues described the occurrence of doom anxiety, depression, hallucinations, and delusions in patients receiving intravenous lidocaine for the treatment of cardiac disease (1). Post et al. (2) had reported that repeated daily injections of lidocaine in subconvulsant doses eventually led to epileptic seizures in rats. Determinations of regional metabolic activity suggested that these seizures were mostly confined to limbic structures such as the hippocampus, amygdala, septal nuclei, and entorhinal cortex.

Intense anxiety and florid hallucinations can be seen in conjunction with temporolimbic epilepsy (3). Furthermore, direct electrical stimulation of the amygdala and adjacent limbic structures in conscious subjects frequently elicits strong experiential phenomena, including sudden emotional experiences and hallucinations (4). It is therefore quite conceivable that the behavioral complications associated with lidocaine (and procaine) toxicity reflect an underlying state of limbic hyperactivity. In some patients this may eventually proceed to partial complex epilepsy, while in others a state of hyperexcitability without epileptic discharges may prevail. EEG recordings during lidocaineinduced symptoms may be useful for testing this hypothesis. If such a relationship is established and if the incidence is sufficiently high, antiepileptic medication may become advisable for some patients receiving parenteral lidocaine or procaine.

REFERENCES

- 1. Saravay SM, Marke J, Steinberg MD, et al: "Doom anxiety" and delirium in lidocaine toxicity. Am J Psychiatry 1987; 144:
- 2. Post RM, Kennedy C, Shinohara M, et al: Loca cerebral glucose utilization in lidocaine-kindled seizures. Neuroscience Abstracts 1979; 5:196
- Spiers PA, Schomer DL, Blume HW, et al: Temporolimbic epilepsy and behavior, in Principles of Behavioral Neurology. Edited by Mesulam M-M. Philadelphia, FA Davis, 1985
- 4. Gloor P, Olivier A, Quesney LF, et al: The role of the limbic system in experiential phenomena of temporal lobe epilepsy. Ann Neurol 1982; 12:129-144

M-MARSEL MESULAM, M.D. Boston, Mass.

Dr. Saravay and Associates Reply

SIR: The suggestion by Dr. Mesulam that limbic system hyperactivity might be responsible for the psychiatric syndrome of lidocaine toxicity was first made by Lloyd and Greenblatt (1) and is congruent with our own point of view. Lidocaine, procaine, and cocaine are known to selectively affect the limbic system, especially the amygdala and hippocampus. These latter structures have the lowest seizure threshold in the brain (2). As Dr. Mesulam points out, subconvulsive doses induce electrical discharges and afterdischarges in limbic structures such as the amygdala and hippocampus. Lidocaine seizures begin within these structures, while simultaneous cortical EEGs demonstrate diffuse slowing. The seizures may spread secondarily to the cortex and become generalized. In animals the behavioral signs of lidocaine toxicity at subconvulsive doses parallel the electrical discharges recorded by electrodes implanted in the amygdala (3).

Emotional experiences and hallucinations can indeed be induced by direct stimulation of the amygdala and adjacent limbic structures. Alterations in body tonus may occur (2), and this might explain the profound sense of weakness reported by our patients. Disturbances in memory that are known to occur with hippocampal stimulation may have been responsible for the confusion and amnesia seen in some of our delirious patients.

While there have been no reports, to our knowledge, that amygdaloid stimulation in humans causes doom anxiety, this phenomenon has been described in patients who have complex partial seizures with temporal lobe pathology (4), which is consistent with Dr. Mesulam's position. The suggestion about using anticonvulsants to prevent the neuropsychiatric toxicity of lidocaine is intriguing. Post and Ballenger (5) have shown that diazepam inhibits amygdala kindling, and its effectiveness in preventing or reducing the neuropsychiatric side effects of lidocaine toxicity would be interesting to explore. It is our unsubstantiated clinical impression that standard use of major tranquilizers for delirium is effective in lidocaine and procaine toxicity. A controlled study of the preventive and treatment effectiveness of different agents would not only add to our clinical knowledge but would also

refine our hypotheses about the neurophysiologic basis of lidocaine and procaine toxicity and shed additional light on the function of the amygdala and hippocampus in pathological and normal conditions.

REFERENCES

- Lloyd B, Greenblatt D: Neuropsychiatric sequelae of pharmacotherapy of cardiac arrhythmias and hypertension. J Clin Psychopharmacol 1981; 1:394–398
- Gloor P: Amygdala, in Handbook of Physiology, vol 2, section
 Neurophysiology. Edited by Magoun HW. Washington, DC, American Physiological Society, 1960
- 3. Wagman IH, deJong RH, Prince DA: Effect of lidocaine on the central nervous system. Anesthesiology 1967; 28:155-172
- Greenberg DB, Hochberg FH, Murray GB: The theme of death in complex partial seizures. Am J Psychiatry 1984; 141:1587– 1589
- Post RM, Ballenger JC: Kindling models for the progressive development of psychopathology: sensitization to electrical, pharmacological and psychological stimuli, in Handbook of Biological Psychiatry. Edited by Van Praag HM. New York, Marcel Dekker, 1981

STEPHEN M. SARAVAY, M.D.
JANE MARKE, M.D.
MAURICE D. STEINBERG, M.D.
CHARLES J. RABINER, M.D.
New Hyde Park, N.Y.

Panic Attacks and EEG Abnormalities

SIR: The article "Patients With Panic Attacks and Abnormal EEG Results" by Matthew J. Edlund, M.D., and associates (1) is confusing and, in our opinion, based on an incorrect interpretation of the data presented. Indeed, the clinical material is too heterogeneous to support the discussion and conclusions put forward by the authors.

Half of the patients (cases 1, 3, and 5) most probably suffered from simple partial seizures with autonomic and/or psychic symptoms (2). The history of the patient in case 2 suggests an episodic dyscontrol syndrome, a condition known to be often associated with minor nonspecific EEG abnormalities (3). The diagnosis in case 4 remains uncertain because the patient was quickly lost to follow-up; moreover, the signs could easily have resulted from a progressive brain lesion. Finally, in the last patient (case 6) the EEG abnormality was clearly related to the previous psychosurgical intervention (4). The authors should not be surprised that in these variable electroclinical syndromes the therapeutic outcome is unpredictable.

The article's main danger, however, lurks in the suggestive assumption that the presumed brain dysfunction underlying panic attacks may, at least in some cases, be substantiated by EEG abnormalities. In this context we would like to emphasize the following remarks.

It is well established that discontinuous runs of irregular slow/spiky waves in the temporal regions, particularly of the left hemisphere, have little diagnostic value, especially in middle-aged patients (5). In all paroxysmal disturbances interictal EEG abnormalities do not demonstrate the cerebral origin of the clinical signs, unless both the paroxysmal symptoms and the EEG abnormality are recorded simultaneously or are proven to run a concordant course.

The differential diagnosis of recurring paroxysmal panic attacks positively includes partial seizures with vegetative and/or psychic affective symptomatology (2). Unfortunately, this item is not explicitly mentioned in the DSM-III criteria for panic disorder (DSM-III, pp. 231–232). We do not understand why the authors so hastily ignored and firmly rejected partial ictal phenomena, particularly in patients known to suffer from a longstanding epileptic condition, in whom a change in seizure type may be quite common, or in patients showing brain lesions that predispose to this complication. Moreover, as panic disorder is a relatively common condition, "organic" and "psychogenic" psychosyndromes are not mutually exclusive. In this context we will only refer to the extensive literature dealing with the complex relations between interictal psychopathological states and signs of cerebral involvement, including interictal EEG abnormalities, in epileptic disorders (6).

We have stressed the foregoing considerations because in our opinion it is essential to ascertain the clinical diagnosis and its underlying pathophysiological mechanisms if one is to choose the optimal treatment. The following practical implications must be kept in mind. 1) Ictal phenomena should not be treated with benzodiazepines that are liable to induce fast tolerance during chronic drug treatment. 2) A classic panic disorder should not be treated with antiepileptic drugs just because of some nonspecific EEG features that are most probably unrelated to the condition's etiology. The necessary psychiatric workup and therapeutic interactions should not be withheld from the patient.

REFERENCES

- Edlund MJ, Swann AC, Clothier J: Patients with panic attacks and abnormal EEG results. Am J Psychiatry 1987; 144:508– 509
- Commission on Classification and Terminology of the International League Against Epilepsy: Proposal for revised clinical and electroencephalographic classification of epileptic seizures. Epilepsia 1981; 22:489–501
- 3. Girgis M, Kiloh LG (eds): Limbic Epilepsy and the Dyscontrol Syndrome. New York, Elsevier, 1980
- Van Sweden B: EEG-Spätfolgen nach psychochirurgischen Eingriffen. EEG EMG 1983; 14:12–16
- Niedermeyer E, Lopes da Silva F (eds): Electroencephalography. Baltimore, Urban & Schwarzenberg, 1982
- Hermann BP, Whitman S: Behavioral and personality correlates of epilepsy, a review: methodological and conceptual model. Psychol Bull 1984; 95:451

 –497

B. VAN SWEDEN, M.D., PH.D. P. ROMBAUT, M.D. Ghent, Belgium

Dr. Edlund and Associates Reply

SIR: Although the letter of Drs. Van Sweden and Rombaut makes some useful points about our article, it unfortunately disregards our two most important clinical conclusions: first, that a group of patients exists who have atypical panic attacks in association with hostile behavior followed by social withdrawal and, second, that these patients have small but perhaps important temporal EEG abnormalities. In their letter Drs. Van Sweden and Rombaut imply that we were discussing "classic panic disorder," which we explicitly were not. They ignore the fact, stressed in the article, that although these patients fit the DSM-III criteria for panic disorder, their presentation of symptoms was atypical and they were described throughout as having atypical attacks. The clinical message is that these atypical patients, whose presentation lies somewhere on the border between anxiety

disorders and ictal phenomena, deserve an organic workup (a conclusion with which Drs. Van Sweden and Rombaut would probably agree).

Besides those with the symptom constellation we described, there are no doubt other groups of patients meeting the diagnostic criteria for panic disorder whose symptoms probably result from other forms of cerebral pathology. Drs. Van Sweden and Rombaut have chosen to call this phenomenon "simple partial seizures." We do not argue with this rather vague clinical rubric but would like to make a few points concerning this diagnosis. 1) Partial seizures are characterized as simple or complex depending on the absence or presence of an altered level of consciousness. Partial seizures most often involve the temporal lobes, particularly the medial temporal lobes, and may escape detection by EEG techniques. 2) It seems reasonable to assume that generalized seizures are easier to diagnose and that cases of partial seizures are more likely to be misdiagnosed as primary psychiatric disorders. The proper diagnosis of partial seizures is thus a difficult one. 3) The decision to initiate anticonvulsant treatment in our group of patients was based on the fact that atypical EEG patterns with little prognostic value in asymptomatic populations might still be prognostic in patients with odd and atypical panic attacks. Drs. Van Sweden and Rombaut do not mention that none of the patients in our study who had typical "classic panic disorder" had EEG abnormalities.

We agree with Drs. Van Sweden and Rombaut that ictal phenomena should not be casually treated with benzodiazepines that induce rapid tolerance; however, benzodiazepines such as clonazepam and clorazepate have proven to be clinically useful as anticonvulsants. The clinical corollary is this: if patients with "panic disorder" develop atypical symptoms of the sort we described and become quickly resistant to the benzodiazepines often used to treat the disorder, the clinician should vigorously pursue the possibility of underlying cerebral pathology.

MATTHEW J. EDLUND, M.D. ALAN C. SWANN, M.D. JEFFREY CLOTHIER, M.D. Houston, Tex.

Panic Disorder and Phobic Avoidance

SIR: In their paper "Dependent Personality Disorder Associated With Phobic Avoidance in Patients With Panic Disorder" (1), James Reich, M.D., and colleagues focused attention on an important issue. Panic disorder can be manifested in an uncomplicated form or it can progress to include other affective, behavioral, or somatic disturbances. Dr. Reich and colleagues have shown that patients with uncomplicated panic disorder have fewer dependent and other third-cluster personality traits than do panic patients with the complication of either "limited phobic avoidance" or "extensive phobic avoidance" (agoraphobia). We have recently shown that dependency is also associated with somatization in patients with panic disorder. We found that 12 of 44 panic disorder patients met the DSM-III criteria for somatization disorder. The degree of somatization was found to be independent of state anxiety but significantly correlated with measures of dependency as well as phobic avoidance and depression (2). It would be interesting to obtain similar data on panic patients with secondary affective, obsessive-compulsive, or substance abuse disorders, all frequent and clinically significant complications of panic disorder (3). Dependent personality traits may prove to be an important feature of various complications of panic disorder.

The findings of Dr. Reich and associates support the idea of separate diagnostic categories for panic disorder and panic disorder with phobic avoidance. DSM-III-R, however, subdivides panic disorder into three types: "uncomplicated," "with limited phobic avoidance," and "with extensive phobic avoidance." Dr. Reich and colleagues, while showing that patients with the uncomplicated disorder were different from patients with limited or extensive phobic avoidance, also reported virtually identical dependency and other thirdcluster personality traits in the latter two groups. Although only suggestive, this finding lends more support to the idea of "lumping" rather than "splitting" the limited and extensive phobic avoidance categories of DSM-III-R. Surprisingly, the authors did not comment on this aspect of their findings, which appear to argue against their conclusion that the data 'support the subdivisions of panic disorder proposed in DSM-III-R."

REFERENCES

- Reich J, Noyes R Jr, Troughton E: Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Am J Psychiatry 1987; 144:323–326
- 2. King R, Margraf J, Ehlers A, et al: Panic disorder: overlap with symptoms of somatization disorder, in Panic and Phobias. Edited by Hand I, Wittchen HV. Springer, New York, 1986
- 3. Breier A, Charney DS, Heninger GR: Agoraphobia with panic attacks: development, diagnostic stability, and course of illness. Arch Gen Psychiatry 1986; 43:1029–1036

RICHARD MADDOCK, M.D. Sacramento, Calif.

Drs. Reich and Noyes Reply

SIR: In his letter Dr. Maddock makes several points. First, dependent personality traits can become a serious complication of panic disorder, affecting course of illness and morbidity. Second, Dr. Maddock presents his own findings showing that somatization disorder is also a complication of panic disorder and is associated with dependent traits but not state anxiety. Finally, he notes that we supported subdividing panic disorder into three degrees of agoraphobic symptoms, whereas he felt our data only supported a dichotomous division.

His first point is a restatement of the findings reported in our Journal article, with which we agree. On the second point we are in partial agreement. In our own work on panic disorder, we found a relationship between panic and somatic symptoms, much as Dr. Maddock did. However, in our findings the somatic symptoms were strongly related to the degree of state anxiety (1). Presumably, further research will resolve this disagreement; however, we feel that testing patients in the ill and recovered states is the optimum design. We have not examined the relationship between dependent traits and somatic symptoms and therefore cannot comment on the point.

Dr. Maddock's final point can be answered by reference to the validation process of psychiatric diagnosis. This process includes such items as a clinical description, course of illness, response to treatment, and family studies. Although our personality data in this case do support a dichotomous division, other factors temper that result. First, specification of the amount of phobic avoidance is a valuable clinical descriptor. Second, all empirical evidence on the various factors involving this decision is not yet in. As a result, we agree with the philosophy of the designers of DSM-III and DSM-III-R (Spitzer, personal communication) that it is better initially to include a larger number of categories which will ultimately stand or fall on the empirical evidence than to eliminate categories on the basis of incomplete data.

REFERENCE

 Noyes R, Reich J, Clancy J, et al: Reduction in hypochondriasis with treatment of panic disorder. Br J Psychiatry 1986; 140:631– 635

> JAMES REICH, M.D., M.P.H. RUSSELL NOYES, M.D. *lowa City, lowa*

Early Diagnosis of Water Intoxication by Monitoring Diurnal Variations in Body Weight

SIR: We read with interest the article by Morris Benjamin Goldman, M.D., and Daniel Jonathan Luchins, M.D., on preventing episodes of self-induced water intoxication by monitoring body weight (1). We have used a similar technique (2) and agree that serial weight measurements provide an inexpensive, accurate, noninvasive, and rapid estimation of changes in serum sodium and state of hydration; they are a valuable clinical tool in the management of this condition. We wish to describe a further use for weight monitoring: as a screening test to identify patients with subclinical disturbances in water metabolism who have not yet developed severe symptoms of self-induced water intoxication. Early detection of self-induced water intoxication is important because it is potentially fatal (3), it is difficult to treat, and it may occur through a neuroleptic-induced dopamine supersensitivity mechanism similar to that proposed for tardive dyskinesia (4).

We previously reported a marked diurnal weight variation in nine patients with self-induced water intoxication (5); they had an average gain of 4.0 kg from morning to afternoon. Age-matched nonpolydipsic schizophrenic patients and normal control subjects typically showed a diurnal variation of less than 0.5 kg. A survey of 490 chronic psychiatric inpatients identified 38 (8%) with a diurnal weight variation of 3.0 g or more, of which nine consented to further investigation. None had previously documented polydipsia, polyuria, or hyponatremia. However, five patients had histories of episodes of bizarre, disinhibited, or impulsive behavior, which occurred almost exclusively between the hours of 3:00 p.m. and 8:00 p.m. Serum sodium levels had never been ascertained during these episodes.

On further investigation, all nine patients showed a marked polydipsia of 5-15 liters/day. Serum sodium values in blood taken at 8:00 a.m. were consistently within the normal range (mean=138.0, range=136-142 meq/liter). However, afternoon sodium levels were significantly lower (mean=130.2, range=125-136 meq/liter; T=0, z=2.6, p<.01, Wilcoxon matched-pairs test). Serum sodium levels ascertained during episodes of bizarre or disinhibited behavior by five patients were lower still (mean=125.5, range=121-129 meq/liter) and significantly different from the afternoon values of the asymptomatic patients (T=0, z=2.2, p<.05, Wilcoxon matched-pairs test). In each case,

serum sodium levels the following morning had returned to normal.

Over a 2-year follow-up period, all nine patients remained polydipsic. Two ceased their diurnal weight and sodium variation and also improved psychiatrically. One developed continuous (both morning and afternoon) hyponatremia. Six continued a daily pattern of afternoon hyponatremia and weight gain but normal morning sodium values. Of these six, two developed major motor seizures at sodium levels of 119–126 meq/liter, and one fatally injured himself during a late-afternoon episode of impulsive self-harm.

These findings suggest that a condition of unrecognized polydipsia and "water intolerance"—a recurrent afternoon fluid overload and dilutional hyponatremia—is prevalent in a chronic psychiatric population and may precede the development of severe symptomatic water intoxication by months or years. The earliest symptoms of water intoxication may be a transient afternoon disinhibition or uncovering of psychiatric symptoms that resolve overnight. Serum sodium levels determined from blood obtained at the usual morning collection time are diagnostically valueless. However, measurement of diurnal weight variation is a simple and effective way to identify these patients, and we now use it routinely. In addition, we recommend that a serum sodium level (or if this is unavailable, a body weight) be ascertained for any chronic psychiatric patient with an acute afternoon or evening change in mental state.

REFERENCES

- Goldman MB, Luchins DJ: Prevention of episodic water intoxication with target weight procedure. Am J Psychiatry 1987; 144:365-366
- Ashby YT: Planned change: the development of a program for the management of self-induced water intoxication. Can J Psychiatr Nursing 1987; 28(1):12-14
- Vieweg WVR, David JJ, Rowe WT, et al: Death from selfinduced water intoxication among patients with schizophrenic disorders. J Nerv Ment Dis 1984; 172:552-555
- Jones BD: Psychosis associated with water intoxication: psychogenic polydipsia or concomitant dopaminergic supersensitivity disorder? Lancet 1984; 2:519-520
- Koczapski A, Ibraheem S, Ashby YT, et al: Diurnal variations in hyponatremia and body weight in chronic schizophrenics with self-induced water intoxication. J Clin Investigative Med 1985; 8:A86

ANDRZEJ B. KOCZAPSKI, M.D., C.C.F.P. SHAIKH IBRAHEEM, R.P.N. YVONNE T. ASHBY, R.N., R.P.N. JAIME PAREDES, M.D., F.R.C.P.(C) BARRY D. JONES, M.D., F.R.C.P.(C) RAY ANCILL, M.B., M.R.C. PSYCH. Port Coquitlam, B.C., Canada

Drs. Goldman and Luchins Reply

SIR: Dr. Koczapski and colleagues have identified a clinical syndrome of "bizarre, disinhibited, or impulsive behavior" that occurs in chronic psychiatric inpatients during the late afternoon to early evening hours and is associated with weight gain and dilution of plasma sodium to the range of 121–129 meq/liter. The authors state that these behaviors may precede manifest symptoms of water intoxication and that in at least one case they were probably responsible for a patient's death. The absence of additional details makes it

unclear whether these behaviors differed in a characteristic or marked fashion from the patients' baseline behavior and leaves unaddressed the issue of whether they were the result of 1) an agitated delirium induced by hyponatremia, 2) an increase in psychiatric symptoms induced by hyponatremia, 3) an exacerbation of psychosis or other symptoms associated with increased polydipsia, or 4) an exacerbation of psychosis associated with inappropriate antidiuresis. In the last two cases, the hyponatremia would be a consequence of the polydipsia and inappropriate antidiuresis, respectively, and not the cause of the changes in behavior. We will briefly review the evidence for each possibility.

The commonly described behavioral effects of hyponatremia are impaired mentation, lethargy, and delirium (1). While persons with serum sodium levels in the range described by Dr. Koczapski and associates are frequently described as alert and asymptomatic (1), other researchers have noted impaired mentation, apathy, nightmares, and the sensation of déjà vu (2, 3). Furthermore, it appears clear that organic brain impairment, which appears to be present in many chronic psychotic patients, predisposes to hyponatremic encephalopathy. Thus, it seems possible that hyponatremia might induce an agitated delirium in these patients.

Other psychiatric symptoms, including irritability and restlessness, have been described in alert hyponatremic patients. Because these patients usually have a previous psychiatric history (4), one wonders whether the hyponatremia unmasks symptoms, as Dr. Koczapski and associates speculate in their letter.

In many case reports, polydipsia appears to be associated with increased psychosis and no change in serum sodium level. In some instances it appears to be associated with hydrophilic delusions ("washing out the poisons"), and in others it seems to be a response to agitation. This suggests

that hyponatremia, when it does occur, might be the result rather than the cause of change in behavior.

Finally, there are reports that psychosis per se causes release of the antidiuretic hormone arginine vasopressin (5). In this instance, the hyponatremia would again be the result rather than the cause of the change in behavior.

Dr. Koczapski and associates' description of altered behavior in association with afternoon dilutional hyponatremia is an important observation that could lead to more effective treatment of certain problem behaviors and to early recognition of patients at risk for developing profound hyponatremia. Further clinical and laboratory descriptions of these patients would help to clarify the mechanism of these episodic behaviors and the appropriate interventions.

REFERENCES

- 1. Fraser CL, Arieff A: Metabolic encephalopathy associated with water, electrolyte and acid-base disorders, in Clinical Disorders of Fluid and Electrolyte Metabolism. Edited by Maxwell MH, Kleeman C, Narins R. New York, McGraw-Hill, 1987 McCance RA: Experimental sodium chloride deficiency in man.
- Proc R Soc Lond [Biol] 1936; 119:245-268
- Gehi MM, Rosenthal RH, Fizette NB, et al: Psychiatric manifestations of hyponatremia. Psychosomatics 1981; 22:739-743
- Dubois GD, Arieff AI: Clinical manifestations of electrolyte disorders, in Fluid, Electrolyte and Acid-Base Disorders. Edited by Arieff AI, DeFronzo RA. New York, Churchill Livingstone,
- 5. Raskind MA, Courtney N, Murburg MM, et al: Antipsychotic drugs and plasma vasopressin in normals and acute schizophrenic patients. Biol Psychiatry 1987; 22:453-462

MORRIS B. GOLDMAN, M.D. DANIEL J. LUCHINS, M.D. Chicago, Ill.

Reprints of letters to the Editor are not available.

Following is the comprehensive index for volume 144 of the *Journal*, which covers all material from January 1987 to December 1987. The complete citation for each article in the author index is listed under the name of the first author. Coauthors are listed alphabetically with a cross-reference to the first author; cross-references containing multiple first author names separated by semicolons indicate multiple articles by the coauthor. Book reviews appear in the author index under the name of the reviewer and in the subject index under the heading Books Reviewed; the books reviewed are arranged alphabetically by the surname of the book's first author or editor. In addition to being indexed by author name, letters to the Editor regarding articles published in 1987 are indicated in parentheses after the citations for those articles.

Each entry in the subject index is identified by the surname of the first author only; semicolons between names of authors of letters to the Editor indicate multiple letters. All entries are in abbreviated style, and two-letter abbreviations are used for months. Entries other than Special Articles, Regular Articles, Commentaries, Brief Communications, and Clinical and Research Reports are given the following designations: editorial (editorial), In Memoriam (in mem), book review (bk rev), letter to the Editor (letter), and Official Actions (off acts). Corrections are cited with the articles to which they refer and under the heading Corrections in the subject index.

Author Index

A

Abou-Saleh MT: Cortisol suppression index and DST (letter). Ap 525

Abou-Saleh MT: How long should drug therapy for depression be maintained? (letter). Se 1247–1248

Abrams R, Taylor MA, Volavka J: ECT-induced EEG asymmetry and therapeutic response in melancholia: relation to treatment electrode placement. Mr 327–329

Addonizio G, Susman VL, Roth SD: reply to Adityanjee: Diagnosing and defining neuroleptic malignant syndrome (letter). Oc 1371

Addonizio G, Susman VL, Roth SD: reply to JH Friedman: Symptoms of neuroleptic malignant syndrome (letter). Au 1105– 1106

Adityanjee: Diagnosing and defining neuroleptic malignant syndrome (letter). Oc 1370–1371

Adityanjee: Neuroleptic malignant syndrome: facts and controversies (letter). Au 1104

Adityanjee see Jee A Adkins BJ see Taber JI Adler L see Reiter S

Adler LA, Angrist B, Peselow E, Reitano J, Rotrosen J: Clonidine in neuroleptic-induced akathisia. Fe 235-236 (letter: Khot, No 1518-1519)

Adler LA, Angrist B, Peselow E, Reitano J, Rotrosen J: reply to V Khot: Time course of effects of clonidine (letter). No 1519

Adler LA, Reiter S, Angrist B, Rotrosen J: Pindolol and propranolol in neurolepticinduced akathisia (letter). Se 1241–1242 Adler LE see Baker NJ

Adler LW, Zengotita HE: Transitional object use and borderline personality (letter). Se 1250

Adrian C see Hammen C

Aird RB: Neurological aspects of schizophrenia-like psychosis (letter). Oc 1362– 1363

Akiskal HS see Insel TR Alagna S see Loewenstein RJ Alagna SW see Koppelman MCS Albus M see Breier A

Aldrich TE see Fishbain DA

Aleem A see Rainey JM Jr Alexopoulos GS, Young RC, Lieberman KW, Shamoian CA: Platelet MAO activity in geriatric patients with depression and dementia. No 1480–1483

Allen AD see Fudenberg HH Allen RE see Fudenberg HH

Alpert J: Comments on review of brief psychotherapies (letter). No 1515

Al-Sadir J see Matuzas W

Altshuler LL, Cummings JL, Mills MJ: reply to AS David: Differential diagnosis of mute patients (letter). Au 1113

Alvarez WA, Freinhar JP: Clonazepam: an-

Alvarez WA, Freinhar JP: Clonazepam: antidepressant? (letter). Ap 536–537

Alvir J see Goldstein S

Ament A: Rape and multiple personality disorder (letter). Ap 541

American Board of Psychiatry and Neurology, Inc: 1986–1987 annual report of American Board of Psychiatry and Neurology, Inc (off acts). Au 1119–1121

American Psychiatric Association: Guidelines on confidentiality (off acts). No 1522

American Psychiatric Association: Position

statement on AIDS (off acts). Au 1122

American Psychiatric Association: Position statement on HIV-related discrimination (off acts). Au 1122

American Psychiatric Association: Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). My 698–702 (letter: Milman, No 1515)

Amsterdam JD, Henle W, Winokur A, Wolkowitz OM, Pickar D, Paul SM: reply to HH Fudenberg; W Jensen: Epstein-Barr virus and depression (letters). Oc 1375

Amsterdam JD, Schweizer E, Winokur A: Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Fe 170– 175

Ancill R see Koczapski AB

Andreasen NC: bk rev, R Lowell: The Collected Prose. De 1607–1608

Andreasen NC: Creativity and mental illness: prevalence rates in writers and their first-degree relatives. Oc 1288–1292

Andreasen NC see Coryell W; Yates WR Andrews G, Hadzi-Pavlovic D, Christensen H, Mattick R: Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Oc 1331–1334

Angrist B see Adler LA

APA Task Force on Laboratory Tests in Psychiatry: Dexamethasone suppression test: overview of its current status in psychiatry. Oc 1253–1262

Appelbaum PS: reply to B Bursten: Mandatory outpatient treatment (letter). Mr 390
Arato M see Banki CM; Brown WA
Armentano M see Biederman J

Aronson TA: Naturalistic study of imipramine in panic disorder and agoraphobia. Au 1014-1019

Asaad G, Shapiro B: reply to WT Carpenter Jr; FR Frankenburg: Hemodialysis in schizophrenia (letters). Je 830

Asaad G, Shapiro B: reply to FP McKegney: Hallucinations as conversion symptoms (letter). My 696-697

Asaad G, Shapiro B: reply to HS Moffic: What about bicameral mind? (letter). My 696

Ashby YT see Koczapski AB Ashikaga T see Harding CM

Asnis GM see Goldstein S; Harkavy Friedman JM

Assael M see Guy N

Astrachan BM: reply to TL Thompson II: Psychiatrists' income (letter). Mr 391 Astrachan BM see Goodban NA

Auster SL: Stress and psychiatric training (letter). Je 829

Autor S see Biederman J Avison WR, Speechley KN: Discharged psychiatric patient: review of social, social-psychological, and psychiatric correlates of outcome. Ja 10-18

Bacher N see Ross LA

Baer L, Minichiello WE, Jenike MA: Use of portable-computer program in behavioral treatment of obsessive-compulsive disorder (letter). Au 1101

Baer L see Jenike MA

Baker HS, Baker MN: Heinz Kohut's self psychology: overview. Ja 1-9 (letter: /algemae, Se 1252)

Baker MN see Baker HS

Baker NJ, Berry SL, Adler LE: Family diagnoses missed on clinical inpatient service. My 630-632

Bakhai YD, Muqtadir S: Thiamine deficiency and psychosis (letter). My 687-

Baldessarini RJ: bk rev, CR Lake, MG Ziegler (eds): The Catecholamines in Psychiatric and Neurologic Disorders. Se 1232-1233

Baldessarini RJ, Cohen BM: reply to CE Dean: Tardive dyskinesia: serious side effect? (letter). Fe 262

Ballenger JC see Lydiard RB

Balon R, Rainey JM, Yeragani VK, Pohl R: Hemoglobin and erythrocyte indices in panic disorder (letter). Ap 539-540

Balon R see Pohl R

Banki CM, Bissette G, Arato M, O'Connor L, Nemeroff CB: CSF corticotropin-releasing factor-like immunoreactivity in depression and schizophrenia. Jy 873-

Barber J see Vieweg V

Barlow DH: bk rev, M Hersen, AS Bellack (eds): Handbook of Clinical Behavior Therapy With Adults. Ap 518-519

Barnes TRE: bk rev, DE Casey, TN Chase, AV Christensen, J Gerlach (eds): Dyskinesia: Research and Treatment. Jy 957-

Barnshaw HD see Jaffe K. Barouche F see Peselow ED Barter JT: bk rev, LR Jones, RR Parlour (eds): Psychiatric Services for Underserved Rural Populations. Je 818-819

Bartko JJ: reply to JW Thompson: More on standard deviation versus standard error (letter). Ap 541

Bartucci RI, Stewart JT, Kemph JP: Trimipramine in treatment of obsessivecompulsive disorder (letter). Jy 964-965

Bass SM see Erdman HP Bauer SF see Tucker L

Baxter N see Goodnick PJ; Peselow ED

Bear DM see Weilburg JB

Beauclair L see Laporta M

Beck JC, van der Kolk B: Reports of childhood incest and current behavior of chronically hospitalized psychotic women. No 1474-1476

Beck NC see Kashani JH Becker JV see Kavoussi RJ

Beckett A, Summergrad P, Manschreck T, Vitagliano H, Henderson M, Buttolph ML, Jenike M: Symptomatic HIV infection of CNS in patient without clinical evidence of immune deficiency. Oc 1342-1344

Beeghly JHL: bk rev, JH Menkes: Textbook of Child Neurology, 3rd ed. Mr 374-375

Behar D, Stewart MA: Borderline diagnosis for children (letter). Au 1108

Behar D see Vitiello B

Beigler JS: bk rev, R Fine: Narcissism, the Self, and Society. My 677

Bell CC, Thompson B, Shakoor B: Mania and head trauma (letter). Oc 1378-1379 Bemporad J see Vasile RG

Benedek E: Report of Secretary: summary of actions of Board of Trustees, May 1986-May 1987 (off acts). Oc 1381-1388

Benedek EP: bk rev, JW Watson, RE Switzer, JC Hirschberg: Sometimes I'm Jealous; Sometimes I Get Angry (1971); Sometimes I'm Afraid (1971). De 1615-

Benedek EP: Highlights of 140th annual meeting (off acts). Au 1115-1118

Benjamin B see Manning WG Jr

Benson DF: bk rev, JM Tonkonogy: Vascular Aphasia. Mr 375-376

Berchou R see Pohl R; Rainey JM Jr Beresford TP see Salam SA

Berg CJ see Kruesi MJP

Berman CW, McGrath PJ, Stewart JW: Doses and blood levels of tricyclic antidepressants (letter). Fe 250-251

Berman KF, Weinberger DR, Shelton RC, Zec RF: Relationship between anatomical and physiological brain pathology in schizophrenia: lateral cerebral ventricular size predicts cortical brain flow. Oc 1277-1282

Bernasconi G see Magni G Bernat JL see Green RL Bernier H see Maziade M Berry SL see Baker NJ

Bick PA, Kinsbourne M: Auditory hallucinations and subvocal speech in schizophrenic patients. Fe 222-225 (letter: Evenson, Oc 1364-1365)

Biederman J, Munir K, Knee D, Armentano M, Autor S, Waternaux C, Tsuang M: High rate of affective disorders in probands with attention deficit disorder and in their relatives: controlled family study. Mr 330-333 (letter: Pugh, Oc 1266)

Bienenfeld D see Thienhaus OJ

Binder RL: AIDS antibody tests on inpatient psychiatric units. Fe 176-181

Binder RL, Kazamatsuri H, Nishimura T, McNiel DE: Tardive dyskinesia and neuroleptic-induced parkinsonism in Japan. No 1494-1496

Binder RL see McNiel DE Bires JK see Erdman HP Bissette G see Banki CM

Black DW: bk rev, BE Park: The Impact of Illness on World Leaders. De 1616-1617 Black DW: bk rev, WH Reid, D Dorr, JI Walker, JW Bonner III (eds): Unmasking

the Psychopath: Antisocial Personality and Related Syndromes. Jy 954-955 Black DW see Strawn K; Winokur G

Blackwell J: Proposed changes in DSM-III substance dependence criteria (letter). Fe 2.58

Blaine JD see Thompson JW Bland WP see Ross LA Blank D see Roy-Byrne PP

Blazer D, Hughes D, George LK: Stressful life events and onset of generalized anxiety syndrome. Se 1178-1183

Bleich A see Solomon Z Bloom ET see Irwin M

Bloom JD, Faulkner LR: Competency determinations in civil commitment. Fe 193-196

Bloom JD, Rogers JL: Legal basis of forensic psychiatry: statutorily mandated psychiatric diagnoses. Jy 847-853

Bloom ID see Maricle R

Bloomingdale KL see Vasile RG

Blum A: Neuroleptic malignant syndrome (letter). Je 831-832

Blume S: bk rev, AI Alterman (ed): Substance Abuse and Psychopathology. Ja 113-114

Blume SB: bk rev, S Cohen, JF Callahan (eds): The Diagnosis and Treatment of Drug and Alcohol Abuse. Au 1095

Blume SB see Lesieur HR Blumenthal SJ see Frank E Boato P see Moscarelli M

Boeck M see Harkavy Friedman JM

Boller F see Zubenko GS

Boronow J see Breier A

Borson S, Liptzin B, Nininger J, Rabins P: Psychiatry and nursing home. No 1412-1418

Borus JF see Yager J

Bosmann HB see Thienhaus Oj Boulanger G see Kadushin C

Boutin P see Maziade M

Bowden C see Mohl PC

Bowers MB Jr see Greenfeld D Bowler K see Mavissakalian M

Branchey L, Davis W, Lee KK, Fuller RK: Psychiatric complications of disulfiram treatment. Oc 1310-1312

Breier A, Albus M, Pickar D, Zahn TP, Wolkowitz OM, Paul SM: Controllable and uncontrollable stress in humans: alterations in mood and neuroendocrine and psychophysiological function. No 1419-1425

Breier A, Wolkowitz OM, Doran AR, Roy A, Boronow J, Hommer DW, Pickar D: Neuroleptic responsivity of negative and positive symptoms in schizophrenia. De 1549-1555

Breier A see Harding CM Breitner JCS see Silverman JM

Breslau N, Davis GC: Posttraumatic stress disorder: etiologic specificity of wartime stressors. My 578-583

Brett E see Laufer RS

Brill NQ: Robert O Pasnau, MD, one hundred fifteenth president, 1986-1987. Au 986-988

Brittain HM see Hendrie HC Brodie JD see Volkow ND

Bromberg W: Perception of time (letter). Oc 1364

Bromet EJ see Dew MA Brooks GW see Harding CM

Brower KJ: Smoking of prescription anticholinergic drugs (letter). Mr 383

Brown R see Markowitz J
Brown SR, Jenike MA, Summergrad P,
Schwartz JM: reply to JP Strang: Symptom definition in evaluation of globus (letter). Oc 1380

Brown SR see Jenike MA

Brown WA, Arato M, Shrivastava R: reply to F Holsboer: Serotonin reuptake inhibitors and DST status (letter). Fe 263-264 Bruun R see Weiden P

Bryer JB, Nelson BA, Miller JB, Krol PA: Childhood sexual and physical abuse as factors in adult psychiatric illness. No 1426-1430

Buchsbaum MS, Wu JC: Hypofrontality in schizophrenia as assessed by PET (letter). Ia 122

Buck RE: For-profit psychiatric hospitals (letter). Mr 395

Bulik CM: Drug and alcohol abuse by bulimic women and their families. De 1604-1606

Burd L, Kerbeshian J: Onset of Gilles de la Tourette's syndrome before 1 year of age. Au 1066-1067

Burd L see Kerbeshian J Burge D see Hammen C

Burgess AW, Hartman CR, McCormack A: Abused to abuser: antecedents of socially deviant behaviors. No 1431-1436

Burges Watson IP: Posttraumatic stress disorder in Japanese prisoners of war (letter). Au 1110

Burke GV see Rogers GA

Burke JD Jr, Pincus HA, Pardes H: reply to JH Meador-Woodruff; RC Malenka: Clinician-researchers in psychiatry (letters). Ap 536

Burke JD Jr, Pincus HA, Pardes H: reply to MM Sarasua: Keeping clinician-researcher alive (letter). Fe 263

Burket RC, Hodgin JD: Depression in women with normal-weight bulimia (letter). Oc 1375–1376

Burnam MA see Wells KB Burns EA see True BL

Burstein A: Chronic posttraumatic stress disorder (letter). Je 827

Bursten B: Mandatory outpatient treatment (letter). Mr 389-390

Bursten B: reply to GB Leong: Outpatient civil commitment (letter). My 695

Bursztajn H see Gutheil TG Butler RW see Mueser KT Buttolph ML see Beckett A

 \mathbf{C}

Cadoret RJ: bk rev, P Ostwald: Schumann: The Inner Voices of a Musical Genius. De

Cadoret RJ see Price RA

Calabrese JR, Kling MA, Gold PW: Alterations in immunocompetence during stress, bereavement, and depression: focus on neuroendocrine regulation. Se 1123-1134

Calev A see Shapira B Campeas R see Fyer AJ Cancro R see Volkow ND Cane M see Greenman DA

Cantwell DP: bk rev, LM Bloomingdale: Attention Deficit Disorder: Identification, Course, and Rationale. Fe 245

Cantwell DP: bk rev, JM Wiener (ed): Diagnosis and Psychopharmacology of Childhood and Adolescent Disorders. Oc 1357-1359

Carlson GA, Murray P: bk rev, S Schwartz, JH Johnson: Psychopathology of Childhood: A Clinical-Experimental Approach, 2nd ed. Se 1237

Carlson GA see Kashani JH Caroff SN see Mann SC

Carpenter WT Jr: Hemodialysis in schizophrenia (letter). Je 830

Carpenter WT Jr, Heinrichs DW, Hanlon TE: Comparative trial of pharmacologic strategies in schizophrenia. No 1466-1470

Carson RA: More on psychiatrist-patient sexual contact (letter). My 689

Casper RC see Stokes PE

Castelnuovo-Tedesco P: Comments on review of brief psychotherapies (letter). No 1516

Castelnuovo-Tedesco P: Denial in recipients of heart transplants (letter). Ap 532-533

Catteau J see Dupuis B Cazzullo CL see Moscarelli M Cella DF see Perry SW Cesana BM see Moscarelli M Chang S see Secunda SK

Chapin K, Wightman L, Lycaki H, Josef N, Rosenbaum G: Difference in reaction time between subjects with schizotypal and borderline personality disorders. Jy 948-950

Char WF see McDermott JF Jr

Charach R: Poetry and psychopathology (letter). No 1521

Charney DS, Woods SW, Goodman WK, Heninger GR: Neurobiological mechanisms of panic anxiety: biochemical and behavioral correlates of yohimbine-induced panic attacks. Au 1030-1036

Charney DS see Price LH Cherksey BD see Lewis DO

Chessick RD: bk rev, J McDougall: Theaters of the Mind: Illusion and Truth on the Psychoanalytic Stage. Ap 515-516 Chessick RD: bk rev, RS Wallerstein (ed):

Forty-Two Lives in Treatment: A Study of Psychoanalysis and Psychotherapy. My 678-680

Ching J see McDermott JF Jr

Chodoff P: Effects of new economic climate on psychotherapeutic practice. Oc 1293-1297

Chodoff P: More on multiple personality disorder (letter). Ja 124

Chopra HD: Psychosis in obsessive-compulsive disorder (letter). Oc 1363-1364

Chou JC-Y see Serby M

Chouinard G, Steinberg S, Steiner W: Estrogen-progesterone combination: another mood stabilizer? (letter). Je 826

Chouinard G see Laporta M Christensen H see Andrews G Christison C see Hinkle PE Chrousos GP see Roy A

Ciccone PE: Misuse and abuse of benzodiazepines (letter). Se 1246

Claman JM: Thioridazine for peptic ulcer disease? (letter). Mr 392

Clare AW: bk rev, J Eccles, R Sperry, I Prigogine, B Josephson (eds): Nobel Prize Conversations. De 1617

Clark D see Fawcett J

Clark DC, Young MA, Scheftner WA, Fawcett J, Fogg L: Field test of Motto's Risk Estimator for Suicide. Jy 923-926

Clarkson C see Noyes R Jr

Climko RP: Depression and decongestants (letter). Oc 1376-1377

Clothier J see Edlund MJ Cocilovo V see Goodban NA Coffey CE see Hinkle PE

Coffman J see Pinta ER

Cohen BM see Baldessarini RJ; Zubenko

Cohen GD: Council on Aging (off acts). Mr 397-398

Cohen IM: Report of Speaker-Elect (off acts). Oc 1397

Cohen MJ see DePaulo JR Jr Cohen RM see Sunderland T

Cohler B see Lazarus LW

Colarusso CA, Nemiroff RA: Clinical implications of adult developmental theory. Oc 1263-1270

Cole JO see Gardos G Comite F see Lewis DO Conover S see Susser E Conrad C see Greenfeld D Cook B see Shukla S Cook BL see Shukla S Coons DJ see Winslow RS

Cooper AM: bk rev, L Havens: Making Contact: Uses of Language in Psychotherapy. Au 1088 Cooper AM: bk rev, M Krüll: Freud and

His Father; translated by AJ Pomerans. De 1614-1615

Cooper AM see Perry S Cooper T see Georgotas A Cooper TB see Georgotas A Copolov DL see Keks NA Corcoran CM see Kashani JH Correa EI see DePaulo JR Jr

Coryell W: Shifts in attitudes among psychiatric residents: serial measures over 40 years. Jy 913-917 Coryell W, Andreasen NC, Endicott J,

Keller M: Significance of past mania or

hypomania in course and outcome of major depression. Mr 309-315

Coryell W, Zimmerman M: Progress in classification of functional psychoses. No 1471-1474

Coryell W see Fawcett J; Reich J; Zimmerman M

Côté R see Maziade M Cowdry RW see Lucas PB

Cowley DS, Dager SR, Foster SI, Dunner DL: Clinical characteristics and response to sodium lactate of patients with infrequent panic attacks. Je 795-798

Cowley DS see Dager SR

Coyle PK, Sterman AB: reply to RJ Mathew: Cerebral ischemic symptoms in anxiety disorders (letter). Fe 265

Coyne L see Gabbard GO Craig TJ see Zito JM Creasey D see Vasile RG Cress M see Hinkle PE Croughan J see Secunda SK Crovitz HF see Pepper PP Crowe RR see Noyes R Jr Cuerdon T see Mumford E Cummings EM see Kruesi MJP Cummings JL see Altshuler LL Cummings KL see Rapaport MH Cummings MA see Rapaport MH

Dager SR, Holland JP, Cowley DS, Dunner DL: Panic disorder precipitated by exposure to organic solvents in work place. Au 1056-1058

Dager SR see Cowley DS

Daghestani AN: Mental illness in Jerusalem (letter). Je 836

D'Angelo L see Silber T

Daniels M see Irwin M

Dar R see Perse TL

Darko DF see Glassman JNS

David AS: Differential diagnosis of mute patients (letter). Au 1113

Davidson J see Kudler H

Davidson M, Keefe RSE, Mohs RC, Siever LJ, Losonczy MF, Horvath TB, Davis KL: L-Dopa challenge and relapse in schizophrenia. Jy 934–938

Davidson M see Davis KL; Kanof PD; Keefe RSE; Silverman JM

Davies SO see Fyer AJ

Davis BM see Davis KL; Weiner MF

Davis GC see Breslau N

Davis IH see Fishbain DA Davis JM see Janicak PG; Stokes PE

Davis KL, Hollander E, Davidson M, Davis BM, Mohs RC, Horvath TB: Induction

of depression with oxotremorine in patients with Alzheimer's disease. Ap 468-

Davis KL see Davidson M; Greenwald BS; Kanof PD; Keefe RSE; Silverman JM; Weiner MF

Davis W see Branchey L

Davous P: Cortisol and Alzheimer's disease (letter). Ap 533-534

Dealy R see Mavissakalian M

Dean CE: Tardive dyskinesia: serious side effect? (letter). Fe 261-262

DeChillo N see Glick ID

Decina P see Sackeim HA

de Kroon J: bk rev, G Claridge: Origins of Mental Illness: Temperament, Deviance and Disorder. Je 816-817

Delanev MA see Vitiello B

de Marneffe D see Mollica RF

Demb HB: Right-hemisphere deficit syndrome in children (letter). Je 830-831

DeMyer MK see Hendrie HC Dent O see Tennant C

DePaulo JR Jr, Cohen MJ, Correa EI, Sapir DG: reply to G Johnson: Renal function

and lithium (letter). Je 823 DeRosis H, Hamilton JA, Morrison E, Strauss M: More on psychiatrist-patient sexual contact (letter). My 688-689

Detre T: Future of psychiatry. My 621-625

Devereux RB see Shear MK

deVries M see Loewenstein RJ

Dew MA, Bromet EJ, Schulberg HC, Dunn LO, Parkinson DK: Mental health effects of Three Mile Island nuclear reactor restart. Au 1074-1077

Dhopesh VP: bk rev, D Blum: Bad Karma: A True Story of Obsession and Murder.

Dickey B see McGuire TG; Mitchell IB DiFiore J see Harkavy Friedman JM

Dilsaver SC: Nicotine and panic attacks (letter). Se 1245-1246

di Mario F see Magni G

DiMarzio LR see Giannini AJ Dimatteo L see Eisendrath SI

Dimsdale JE: bk rev, FG Guggenheim (ed): Psychological Aspects of Surgery. Se 1231-1232

Doran A see Roy A

Doran AR see Breier A

Dorovini-Zis K, Zis AP: Increased adrenal weight in victims of violent suicide. Se

Douglas CJ see Kalman TP Douglas J see Eisendrath SJ

Drexler H see Shapira B

Drinka PJ, Streim JE: Dementia and depression (letter). Oc 1368–1369

Drusin RE see Kahn JP

Dumon J-P see Dupuis B

Duncan E see Reiter S

Dunn LO see Dew MA

Dunner DL: bk rev, A Kleinman: Social Origins of Distress and Disease: Depression, Neurasthenia, and Pain in Modern China. De 1617-1618

Dunner DL: bk rev, JH Lazarus: Endocrine and Metabolic Effects of Lithium. Ap 520 Dunner DL see Cowley DS; Dager SR

Dupuis B, Catteau J, Dumon J-P, Libert C, Petit H: Comparison of propranolol, sotalol, and betaxolol in treatment of neuroleptic-induced akathisia. Je 802-

Eaton MT see Yang L Ebstein RP see Lerer B Edelstein CK see Yager J Edlund MJ, Swann AC, Clothier J: Patients with panic attacks and abnormal EEG results. Ap 508-509 (letter: Van Sweden, De 1624)

Edlund MJ, Swann AC, Clothier J: reply to

B Van Sweden: Panic attacks and EEG abnormalities (letter). De 1624-1625

Edwards IG: Human Psychophaimacology (letter). Ap 524

Eichelman B see Whitman JR

Eisenberg L: reply to RE Buck: For-profit psychiatric hospitals (letter). Mr 396

Eisendrath SJ, Goldman B, Louglas J, Dimatteo L, Van Dyke C: Meperidineinduced delirium. Au 1062-1065

Eisendrath SJ, Sweeney M/1: Toxic neuropsychiatric effects of digoxin at therapeutic serum concentrations. Ap 506-507

Ely T see Kudler H

Emrich HM see Schmauss C

Emslie GJ, Roffwarg HP, Rush AJ, Weinberg WA, Parkin-Feigenbaur L: Sleep EEG findings in depressed children and adolescents. My 668-670

Endicott J see Coryell W; Goldstein S Eppright TD, Favazza AR: Understanding meaning of symptom (letter). De 1620-1621

Erdberg P see French AP

Erdman HP, Klein MH, Greist JH, Bass SM, Bires JK, Machtinger PE: Comparison of Diagnostic Interview Schedule and clinical diagnosis. No 1477-1180

Erle S see Reiter S

Ernsberger P: Complications of surgical treatment of obesity (letter). Je 833-834 Eth S see Mills MI

Evans DL see Haggerty JJ Jr

Evenson RC: Auditory hallucinations and subvocal speech (letter). Oc 1364-1365 Evenson RC: Long-term effect, of incest (letter). Jy 967-968

Falicki Z see Wandzel L Fallahi C see Kashani JH Farlow MR see Hendrie HC Farma T see Moscarelli M Farr RM see McEvoy JP Faulkner LR see Bloom JD

Faulstich ME: Psychiatric aspects of AIDS. My 551-556

Faust D: reply to LD Hankoff; M Spital; A Rifkin: More on empiricist and his new

clothes (letters). My 692-693

Faust D: reply to WF Sheeley: Francis Bacon and DSM-III (letter). Mr 386

Faust D: reply to MO Strahl; MA Schwartz; M Raja: Empiricism and DSM-III (letters). Je 838

Fava GA: ACTH response to corticotropinreleasing hormone (letter). Au 1102

Favazza AR: bk rev, LA Bennett, GM Ames (eds): The American Experience With Alcohol: Contrasting Cultural Perspectives. Fe 240

Favazza AR see Eppright TD

Fawcett J, Scheftner W, Clark D, Hedeker D, Gibbons R, Coryell W: Clinical predictors of suicide in patients with major affective disorders: controlled prospective study. Ja 35-40

Fawcett J see Clark DC Fawzy FI see Klein DE Feinberg KG see Feinberg SS

Feinberg SS, Feinberg KG: Mental illness in

Jerusalem (letter). Je 835-836

Feldman DB: Insurance coverage of mental health care (letter). Je 829-830

Feldstein M see Herman J; Herman JL Feldstein ML see Gartrell N

Felthous AR, Kellert SR: Childhood cruelty to animals and later aggression against people: review. Je 710-717

Fenton BT see Vasile RG

Fenton WS, McGlashan TH: Sustained remission in drug-free schizophrenic patients. Oc 1306-1309

Fenton WS, Robinowitz CB, Leaf PJ: Male and female psychiatrists and their patients. Mr 358-361

Ferguson JM: Treatment of anorexia nervosa patient with fluoxetine (letter). Se

Fieve RR see Goodnick PJ; Peselow ED Figley CR: bk rev, JO Brende, ER Parson: Vietnam Veterans: The Road to Recovery. Ap 522

Figley CR: bk rev, MJ Horowitz: Stress Response Syndromes, 2nd ed. Se 1230-

Finch SM: bk rev, EA Schwaber (ed): The Transference in Psychotherapy: Clinical Management. No 1499

Fine T see Pincus HA

Fink M: New technology in convulsive therapy: challenge in training (editorial). Se 1195-1198

Fink PJ: Mental Illness Awareness Week (editorial). Oc 1298-1300

Fisch R see Riskin J

Fischbach M see Mohl PC

Fishbain DA, Fletcher JR, Aldrich TE, Davis JH: Relationship between Russian roulette deaths and risk-taking behavior: controlled study. My 563-567 (letter: Grosz, No 1519)

Fishbain DA, Fletcher JR, Aldrich TE, Davis JH: reply to HJ Grosz: Russian roulette and suicide (letter). No 1519-1520

Flament M see Kruesi MJP Fleming L see Glick ID Fletcher JR see Fishbain DA

Flynn WR: bk rev, LF Frelick, EM Waring (eds): Marital Therapy in Psychiatric Practice: An Overview. No 1504

Flynn WR: bk rev, MR Lansky (ed): Family Approaches to Major Psychiatric Disorders; KF Bernheim, A Lehman: Working With Families of the Mentally Ill. Jy 958-959

Fogg L see Clark DC

Folstein MF: bk rev, FC Rose (ed): Modern Approaches to the Dementias, Part I: Etiology and Pathophysiology; FC Rose (ed): Modern Approaches to the Dementias, Part II: Clinical and Therapeutic Aspects. Jy 963

Ford CV see King BH

Forrest DV: Treatment of patient with airplane phobia (letter). Ap 526-527

Foster SI see Cowley DS Foulks E see Maany I

Fox HA: Schneider's first-rank symptoms (letter). Oc 1377-1378

Frances A see Trull TJ; Weiden PJ

Frances AJ: bk rev, SE Greben, VM Rakoff, G Vioneskos (eds): A Method of Psychiatry, 2nd ed. My 685

Frances AJ: bk rev, MH Stone (ed): Essential Papers on Borderline Disorders: One Hundred Years at the Border. Jy 954

Frances AJ see Kocsis JH; Shear MK Francis G see Last CG

Frank E, Kupfer DJ, Jacob M, Blumenthal SJ, Jarrett DB: Pregnancy-related affective episodes among women with recurrent depression. Mr 288-293

Frank E see Kupfer DJ; Thase ME

Frankel FH: bk rev, EL Rossi, MO Ryan (eds): Life Reframing in Hypnosis: The Seminars, Workshops, and Lectures of Milton H. Erickson, vol II. Mr 381-382

Frankenburg FR: Hemodialysis in schizophrenia (letter). Je 830

Frankenburg FR see Hudson II Franssen EH see Serby M Fredrickson PA see Lin S-C

Freedman R: bk rev, DB Feinsilver (ed): Towards a Comprehensive Model for Schizophrenic Disorders: Psychoanalytic Essays in Memory of Ping-Nie Pao, MD. Oc 1353-1354

Freedman R: bk rev, AJ Frances, RE Hales (eds): Psychiatry Update: American Psychiatric Association Annual Review, vol 5. Ap 515

Freiman MP, Mitchell JB, Rosenbach ML: Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. My 603-609

Freinhar JP see Alvarez WA

French AP, Erdberg P: Scale for measuring patients' ability to cope (letter). Mr 389 French O: More on multiple personality

disorder (letter). Ja 123-124

Friedman E see Georgotas A

Friedman HJ: bk rev, PM Chatham: Treatment of the Borderline Personality. Fe 241-242

Friedman HJ: bk rev, H Rosen: Piagetian Dimensions of Clinical Relevance. Au 1091-1092

Friedman JH: Neuroleptic malignant syn-

drome (letter). Je 831 Friedman JH, Wagner RL: Symptoms of neuroleptic malignant syndrome (letter).

Friedman MJ, West AN: Current need versus treatment history as predictors of use of outpatient psychiatric care. Mr 355-357 (letter: Ramchandani, Oc 1371-

Friedman MJ, West AN: reply to D Ramchandani: Utilization of mental health care services (letter). Oc 1372

Frosch W see Hellerstein D

Fudenberg HH, Allen AD, Pitts FN Jr, Allen RE: Epstein-Barr virus and depression (letter). Oc 1374

Fuerst H: Torture and legal system (letter). Au 1113-1114

Fukunaga C see McDermott JF Jr

Fuller AK: bk rev, EL Bliss: Multiple Personality, Allied Disorders and Hypnosis. Mr 382

Fuller AK see Tingle D Fuller RK see Branchey L

Fulop G, Phillips RA, Shapiro AK, Gomes JA, Shapiro E, Nordlie JW: ECG changes during haloperidol and pimozide treat-ment of Tourette's disorder. My

673-675

Fulop G, Strain JJ, Vita J, Lyons JS, Hammer JS: Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: preliminary report. Jy 878–882

Fyer A see Fyer MR

Fyer AJ, Liebowitz MR, Gorman JM, Campeas R, Levin A, Davies SO, Goetz D, Klein DF: Discontinuation of alprazolam treatment in panic patients. Mr 303-308

Fyer MR, Uy J, Martinez J, Goetz R, Klein DF, Fyer A, Liebowitz MR, Gorman J: CO₂ challenge of patients with panic disorder. Au 1080-1082

Gabbard GO, Menninger RW, Coyne L: Sources of conflict in medical marriage. My 567-572

Gadpaille WJ, Sanborn CF, Wagner WW Jr: Athletic amenorrhea, major affective disorders, and eating disorders. Jy 939-942

Galarraga W see Kutcher SP Gallops MS see Laufer RS

Ganguli R, Rabin B, Jarrett D: Cortisol and dexamethasone blood levels and phytohemagglutinin response (letter). Ap

Garb R see Solomon Z

Garbutt JC: Potentiation of propoxyphene by phenelzine (letter). Fe 251-252

Garbutt JC, Mayo JP, Gillette GM: reply to W Harrison: Potentiation of antidepressants by T_3 and lithium (letter). Ap 531

Gardner DL see Lucas PB

Gardner EL: bk rev, LS Seiden, RL Balster (eds): Behavioral Pharmacology: The Current Status. Ap 520

Gardos G, Cole JO, Salomon M, Schniebolk S: Clinical forms of severe tardive dyskinesia. Jy 895-902

Garfinkel B see Merrill RD Garfinkel PE see Toner BB Garner DM see Toner BB Garrettson LK see Poe RO

Gartrell N: reply to KA Nakdimen; K Jaffe: Libido in women receiving trazodone (letters). Ja 123

Gartrell N, Herman JL, Olarte S, Feldstein ML, Localio AR: reply to JL Levenson: Psychiatrist-patient sexual contact (letter). Ap 530

Gartrell N see Herman JL

Garvey M see Tollefson GD Garvey MJ, Tollefson GD: reply to PE Ciccone: Misuse and abuse of benzodiazepines (letter). Se 1246-1247

Gauron EF: bk rev, RS Lazarus, S Folkman: Stress, Appraisal, and Coping; D Meichenbaum: Stress Inoculation Training. Ap 521-522

Gauron EF: bk rev, ID Yalom: The Theory and Practice of Group Psychotherapy, 3rd ed. Ap 517-518

Gauthier S see Ghadirian AM

Gelber GS, Schatz H: Loss of vision due to central serous chorioretinopathy following psychological stress. Ja 46-50

Geller JL: reply to GB Leong: Outpatient

civil commitment (letter). My 695-696 Geller JL: reply to D Mossman: Coerced outpatient treatment (letter). Jy 968-969 Geller JL, Hoge SK: Voluntary and involuntary patients (letter). Au 1112-1113 George AW see Zubenko GS

George DT, Ladenheim JA, Nutt DJ: Effect of pregnancy on panic attacks. Au 1078-1079

George LK see Blazer D

George MS: Neuroscience and psychiatry (letter). Au 1103

Georgotas A, McCue RE, Friedman E, Cooper T: Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Mr 338-340

Georgotas A, McCue RE, Friedman E, Cooper TB: Electrocardiographic effects of nortriptyline, phenelzine, and placebo under optimal treatment conditions. Je 798-801

Gerken A see Holsboer F

Ghadirian AM, Gauthier S, Wong T: Convulsions in patients abruptly withdrawn from clonazepam while receiving neuroleptic medication (letter). My 686

Giannini AJ, Loiselle RH, DiMarzio LR, Giannini MC: Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Se 1207-1209

Giannini AI see Price WA Giannini MC see Giannini AJ Gibbons R see Fawcett J

Gilbert A, Hendrie HC: Treatment of agitated depression with alprazolam (letter). My 688

Gilboa D see Shapira B Giller EL Jr see Perry BD Gillette GM see Garbutt JC

Gillin JC: bk rev, L Lamberg: Straight Talk, No-Nonsense Guide to Better Sleep; edited by AMA. Mr 376–377
Gillin JC: Sleep reduction: factor in genesis

of mania? (letter). Se 1248 Gladis MM, Walsh BT: Premenstrual exac-

erbation of binge eating in bulimia. De 1592-1595

Glanz LM see Thase ME Glass RM see Matuzas W

Glassman JNS, Magulac M, Darko DF: Folie à famille: shared paranoid disorder in Vietnam veteran and his family. My 658-660

Gleghorn AA see Powers PS

Glick ID, Fleming L, DeChillo N, Meyerkopf N: reply to DE Ness: Transitional day hospitalization (letter). No 1520-

Glick JL see Vieweg V Godes M see Tollesson GD Godleski LS see Vieweg V Godwin C see Shukla S Goetz D see Fyer A] Goetz R see Fyer MR Goff DC see Jenike MA Gold E see Schuckit MA Gold MS see Roehrich H Gold PW see Calabrese JR; Roy A

Goldbloom D see Laporta M Golding JM see Wells KB

Goldman B see Eisendrath SJ Goldman HH, Sharfstein SS: Are specialized psychiatric services worth higher cost? (editorial). My 626-628

Goldman MB, Luchins DJ: Prevention of episodic water intoxication with target weight procedure. Mr 365-366 (letter: Koczapski, De 1626)

Goldman MB, Luchins DJ: reply to AB Koczapski: Early diagnosis of water intoxication by monitoring variations in body weight (letter). De 1626-1627

Goldney RD, Spence ND: reply to P Weiden: Lithium and extrapyramidal side effects of neuroleptics (letter). Fe 264-265

Goldstein G, van Kammen W, Shelly C, Miller DJ, van Kammen DP: Survivors of imprisonment in Pacific theater during World War II. Se 1210-1213

Goldstein N: Council on Psychiatric Services (off acts). Mr 408-411

Goldstein RL: Patient incompetence in legal settings (letter). Fe 249

Goldstein S, Halbreich U, Asnis G, Endicott J, Alvir J: Hypothalamic-pituitary-adrenal system in panic disorder. Oc 1320-1323

Golinger RC, Peet T, Tune LE: Association of elevated plasma anticholinergic activity with delirium in surgical patients. Se 1218-1220

Gomes JA see Fulop G Gomez-Mont F see Volkow ND

Goodban NA, Lieberman PB, Levine MA, Astrachan BM, Cocilovo V: Conceptual and methodological issues in comparison of inpatient psychiatric facilities. No 1437-1443

Goodman AB see Rahav M

Goodman WK see Charney DS; Price LH Goodnick PJ, Fieve RR, Schlegel A: Clinical and chemical effects of lithium discontinuation (letter). Mr 385

Goodnick PJ, Fieve RR, Schlegel A, Baxter N: Predictors of interepisode symptoms and relapse in affective disorder patients treated with lithium carbonate. Mr 367–369

Goodwin DW: bk rev, S Cohen: The Substance Abuse Problems, vol 2: New Issues for the 1980s. Au 1094

Goodwin DW: bk rev, DK Goodwin: The Fitzgeralds and the Kennedys: An American Saga. De 1613

Goodwin F see Pincus HA

Goodwin FK see Wehr TA Goodwin J: Transitional object use and borderline personality (letter). Se 1250-1251

Goodwin J see Khot V Gordon D see Hammen C Gorman J see Fyer MR

Gorman JM: Comment on review of The Foundations of Psychoanalysis (letter). Fe 256-257

Gorman JM see Fyer AJ Goulston K see Tennant C

Greden JF see Meador-Woodruff JH

Green MF, Satz P, Soper HV, Kharabi F: Relationship between physical anomalies and age at onset of schizophrenia. My 666-667

Green RC see Pitman RK

Green RL, McAllister TW, Bernat JL: Study of crying in medically and surgi-

cally hospitalized patients. Ap 442-447 Greenberg D see Lerer B

Greenberg WM, Lee KK: Priapism treated with benztropine (letter). Mr 334-385

Greenfeld D, Conrad C, Kincare P, Bowers MB Jr: Treatment of catatonia with lowdose lorazepam. Se 1224-1225

Greenman DA, Gunderson JG, Cane M, Saltzman PR: reply to D Beha: Border-line diagnosis for children (letter). Au 1108-1109

Greenman DA, Gunderson JG, Cane M, Saltzman PR: reply to CT Gualtieri: Socalled borderline children (etter). Je 832-833

Greenspan D see Raines JM

Greenwald BS, Mohs RC, Davis KL: reply to P Davous: Cortisol and Alzheimer's disease (letter). Ap 534-535

Greist JH see Erdman HP; Perse TL Griez E see van den Hout MA Griffing GT see Hudson JI

Grilli A see Moscarelli M

Grof P see Kraus RP

Grolnick SA: Holding environment (letter). Oc 1365-1366

Grossman L see Kettering RL

Grosz HJ: Russian roulette and suicide (letter). No 1519

Grover GN see Roy-Byrne PP Grubb HI see Last CG

Grunebaum H: bk rev, L L'Aba:e: Systematic Family Therapy. No 1503

Grunebaum H: bk rev, H Stierlin, FB Simon, G Schmidt (eds): Familiar Realities: The Heidelberg Conference. No 1503-1504

Grupper D see Solomon Z

Gualtieri CT, Van Bourgondien ME: Socalled borderline children (letter). Je 832

Gudeman JE see Vasile RG Gunderson JG see Greenman DA; Morris H

Gurevich D see Siegel B Gurwitch RH see Milby JB

Gust SW see Hughes JR

Gutheil TG, Bursztajn H: reply to RL Goldstein: Patient incompetence in legal settings (letter). Fe 249

Guy N, Raps A, Assael M: reply to W'L Pilette: Pisa syndrome, or pleurothotonus (letter). Jy 970

Η

Haas G see Weiden PJ

Hadzi-Pavlovic D see Andrews G

Haggerty JJ Jr, Simon JS, Evans DL, Nemeroff CB: Relationship of serum TSH concentration and antitlyroid antibodies to diagnosis and DST response in psychiatric inpatients. No 1491-1493

Hahn RK see Ruedrich SL Halbreich U see Goldstein S Haldipur CV see Stack LS

Halevie-Goldman BD, Potkin SG, Poyourow P: AIDS-related complex presenting as psychosis (letter). Jy 904

Hall KS see Hendrie HC

Hamilton J see Loewenstein RJ Hamilton JA see DeRosis H; Koppelman MCS

Hamilton JD: bk rev, DC Horwell (ed): Drugs in Central Nervous System Disorders. Au 1092-1093

Hammen C, Gordon D, Burge D, Adrian C, Jaenicke C, Hiroto D: Maternal affective disorders, illness, and stress: risk for children's psychopathology. Je 736-741

Hammer JS see Fulop G

Handley R see Koenigsberg HW

Hankoff LD: More on empiricist and his new clothes (letter). My 691

Hanlon TE see Carpenter WT Jr Harding CM, Brooks GW, Ashikaga T, Strauss JS, Breier A: Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Je

Harding CM, Brooks GW, Ashikaga T, Strauss JS, Breier A: Vermont longitudinal study of persons with severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Je 727-735

Hargreaves WA, Shumway M, Knutsen EJ, Weinstein A, Senter N: Effects of Jamison-Farabee consent decree: due process protection for involuntary psychiatric patients treated with psychoactive medication. Fe 188-192

Harkavy Friedman JM, Asnis GM, Boeck M, DiFiore J: Prevalence of specific suicidal behaviors in high school sample. Se 1203-1206

Harlam D see Tucker L

Harris SE, Stevens MA: Comments on review of brief psychotherapies (letter). No 1516-1517

Harrison W, Stewart JW: Potentiation of antidepressants by T₃ and lithium (letter). Ap 530-531

Harrow M see Kettering RL Harshfield G see Shear MK Hartford JT see Thienhaus OJ Hartman CR see Burgess AW

Hauser ST: bk rev, DD Brockman (ed): Late Adolescence: Psychoanalytic Studies. Au 1096-1097

Hauser ST: bk rev, AJ Solnit, RS Eissler, PB Neubauer (eds): The Psychoanalytic Study of the Child, vol 40. No 1506–

Hedeker D see Fawcett I

Hefez A, Metz L, Lavie P: Long-term effects of extreme situational stress on sleep and dreaming. Mr 344-347 Heinrichs DW see Carpenter WT Jr

Hellerstein D, Frosch W, Koenigsberg HW: Clinical significance of command halluci-

nations. Fe 219-221 Hellerstein DJ, Meehan B: Outpatient group therapy for schizophrenic substance abusers. Oc 1337-1339

Henderson M see Beckett A

Hendrie HC, Wellman HN, Hall KS, Farlow MR, Brittain HM, DeMyer MK: Single photon emission tomographic brain images in dementia of the Alzheimer type (letter). Mr 387-388

Hendrie HC see Gilbert A

Heninger GR see Charney DS; Price LH

Henle W see Amsterdam JD

Herman J, Gartrell N, Olarte S, Feldstein M, Localio R: reply to RJ Kavoussi: Psychiatrist-patient sexual contact (letter). Se 1250

Herman JL, Gartrell N, Olarte S, Feldstein M, Localio R: Psychiatrist-patient sexual contact: results of national survey, II: psychiatrists' attitudes. Fe 164-169 (letter: Kavoussi, Se 1249-1250)

Herman JL see Gartrell N

Herman SP: bk rev, JE Mitchell (ed): Anorexia Nervosa and Bulimia: Diagnosis and Treatment. Je 820-821

Hermesh H, Shahar A, Munitz H: Obsessive-compulsive disorder and borderline personality disorder (letter). Ja 120-121

Herring S see Vieweg V Hersen M see Last CG

Hillard JR, Slomowitz M, Levi LS: Retrospective study of adolescents' visits to general hospital psychiatric emergency service. Ap 432–436

Hinkle PE, Coffey CE, Weiner RD, Cress M, Christison C: Use of caffeine to lengthen seizures in ECT. Se 1143-1148

Hiroto D see Hammen C Hirschfeld R see Reich J Hoban MC see Roy-Byrne PP Hodgin JD see Burket RC Hoeper EW see Kashani JH

Hoffman RE: bk rev, B Rosenbaum, H Sonne: The Language of Psychosis. Oc 1355-1356

Hoffmann WF: Identical twins' nonidentical responses to lithium (letter). Se 1240-1241

Hoge SK see Geller JL
Holinger PC, Offer D, Ostrov E: Suicide
and homicide in United States: epidemiologic study of violent death, population changes, and potential for prediction. Fe

Holland JP see Dager SR

Hollander E: Nontartrazine allergy with desipramine (letter). Se 1247

Hollander E see Davis KL

Hollender MH: Comments on review of brief psychotherapies (letter). No 1515 Holsboer F, Gerken A, Stalla GK, Müller

OA: Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Fe 229-231

Holsboer F, von Bardeleben U: Serotonin reuptake inhibitors and DST status (letter). Fe 263

Holtzman JL see Willenbring ML

Hommer DW see Breier A; Wolkowitz OM Horvath TB see Davidson M; Davis KL; Keefe RSE

Hough RL see Wells KB

Houpt JL: Council on Medical Education and Career Development (off acts). Mr 404-405

Howell EF see Lydiard RB

Hsu K, Marshall V: Prevalence of depression and distress in a large sample of Canadian residents, interns, and fellows. De 1561-1566

Hsu LKG: reply to P Leichner: Treatment of anorexia nervosa (letter). Fe 260-261

Hsu T see Lin S-C Huang L see Mohl PC

Hudson JI, Hudson MS, Griffing GT, Melby JC, Pope HG Jr: Phenomenology and family history of affective disorder in Cushing's disease. Jy 951–953

Hudson JI, Pope HG Jr, Yurgelun-Todd D, Jonas JM, Frankenburg FR: Controlled study of lifetime prevalence of affective and other psychiatric disorders in bulimic outpatients. Oc 1283-1287

Hudson MS see Hudson JI

Hudson WW see Thyer BA Hughes D see Blazer D

Hughes JR: reply to I Maany: Nicotine and panic attacks (letter). Fe 255

Hughes JR, Gust SW, Pechacek TF: Prevalence of tobacco dependence and withdrawal. Fe 205-208

Hundert EM: Model for ethical problem solving in medicine, with practical applications. Jy 839-846

Hunt GE, Johnson GF: DST status not predicted by serum sodium levels (letter). Ŝe 1251-1252

Husband SD, Platt JJ: Criteria for diagnosis of PTSD (letter). Mr 388

Hutchinson-Williams K see Lewis DO Hux M see Kraus RP

Ibraheem S see Koczapski AB

Insel TR, Akiskal HS: reply to MG Sandifer: Obsessive-compulsive disorder and psychosis (letter). Jy 969

Irwin M, Daniels M, Bloom ET, Smith TL, Weiner H: Life events, depressive symptoms, and immune function. Ap 437-441

Ismond DR see Kruesi MJP Itoh H see Yagi G

Izutsu S see McDermott JF Jr

Jackson AH: bk rev, KD Gadow: Children on Medication, vol I: Hyperactivity, Learning Disabilities, and Mental Retardation; KD Gadow: Children on Medication, vol II: Epilepsy, Emotional Disturbance, and Adolescent Disorders. Au 1097-1098

Jacob M see Frank E

Jacobsen FM, Sack DA, James SP: Delirium induced by verapamil (letter). Fe 248

Jacobsen FM, Wehr TA, Skwerer RA, Sack DA, Rosenthal NE: Morning versus midday phototherapy of seasonal affective disorder. Oc 1301-1305

Jacobsen FM see Wehr TA

Jacobson A, Richardson B: Assault experiences of 100 psychiatric inpatients: evidence of need for routine inquiry. Jy 908-913

Jacobson JN: Anorgasmia caused by MAOI (letter). Ap 527

Jacoby CG see Yates WR

Jacome DE: Jogging and Tourette's disorder (letter). Au 1100-1101

Jaenicke C see Hammen C

Jaffe K, Barnshaw HD, Weingourt R, Kennedy ME: Libido in women receiving trazodone (letter). Ja 123

James SP see Jacobsen FM James WA see Turns DM

James WS see Veliz J

Janicak PG, Davis JM: reply to JS
Uebersax: ECT results and meta-analysis (letter). Fe 256

Jarrett D see Ganguli R Jarrett DB see Frank E

Jaskiw GE: bk rev, WJH Nauta, M Feirtag: Fundamental Neuroanatomy. Se 1233-

Jayaram G see Rabins P

Jee A: Mortality in neuroleptic malignant syndrome (letter). Ap 531

Jee A see Adityanjee

Jefferson JW see Perse TL

Jenike MA, Brown SR, Summergrad P, Schwartz JM: reply to RM Kaplan; SH Rosenthal; F Weinstein: More on globus hystericus syndrome (letters). Ap 529 Jenike MA, Brown SR, Summergrad P,

Schwartz JM: reply to MR Liebowitz: Globus hystericus and panic attacks (letter). Mr 391

Jenike MA, Vitagliano HL, Rabinowitz J, Goff DC, Baer L: Bowel obsessions responsive to tricyclic antidepressants in four patients. Oc 1347–1348

Jenike MA see Baer L; Beckett A; Brown SR; Pitman RK

Jenkins PL see Kendall EM

Jennings JR see Thase ME Jensen W, Unis AS: Epstein-Barr virus and depression (letter). Oc 1374-1375

Jerome L: Right-hemisphere deficit syndrome in children (letter). Je 830

Joffe RT, Swinson RP: Eating Attitudes Test scores of patients with obsessivecompulsive disorder (letter). No 1510-

Joffe RT see Richter MA Johns CA see Kanof PD

Johnson G: Renal function and lithium (letter). Je 822-823

Johnson RL, Shrier D: Past sexual victimization by females of male patients in adolescent medicine clinic population. My 650-652

Jonas JM see Hudson JI Jones A see Robinson ML Jones BD see Koczapski AB Josef N see Chapin K

Kadushin C, Boulanger G: More on posttraumatic stress disorder (letter). Fe 253 (letter: Laufer, Je 822)

Kahn DA: Possible toxic interaction between cyproheptadine and phenelzine (letter). Se 1242–1243

Kahn JP, Drusin RE, Klein DF: Idiopathic cardiomyopathy and panic disorder: clinical association in cardiac transplant candidates. Oc 1327-1330

Kahn JP, Puertollano M, Schane MD, Klein DF: Schizophrenia, panic anxiety, and alprazolam (letter). Ap 527-528

Kalinowsky LB: Lethal catatonia and neuroleptic malignant syndrome (letter). Au 1106

Kalman CM see Kalman TP

Kalman TP, Kalman CM, Douglas CJ: Homophobia among physicians and nurses treating AIDS patients (letter). No 1514-1515

Kanas N: Psychological and interpersonal issues in space. Je 703-709

Kanof PD, Davidson M, Johns CA, Mohs

RC, Davis KL: Clinical correlates of platelet prostaglandin receptor subsensitivity in schizophrenia. De 1556-1560

Kanofsky D see Kay SR Kanzler M see Sackeim HA

Kaplan RM: More on globus hystericus syndrome (letter). Ap 528-529

Karasu TB: bk rev, MF Weiner: Practical

Psychotherapy. Au 1089 Karno M see Wells KB

Karoum F see Zametkin AJ

Kashani JH, Beck NC, Hoeper EW, Fallahi C, Corcoran CM, McAllister JA, Rosenberg TK, Reid JC: Psychiatric disorders in community sample of adolescents. My 584-589; correction, Au 1114

Kashani JH, Carlson GA: Seriously depressed preschoolers. Mr 348-350

Kashani JH, Carlson GA, Beck NC, Hoeper EW, Corcoran CM, McAllister JA, Fallahi C, Rosenberg TK, Reid JC: Depression, depressive symptoms, and depressed mood among community sample of adolescents. Jy 931–934 Kaslow NJ see Wamboldt FS

Katz MM see Secunda SK

Kavoussi RJ, Becker JV: Psychiatrist-patient sexual contact (letter). Se 1249-1250

Kay SR, Kanofsky D, Lindenmayer J-P, Opler LA: Changing presentation of catatonia (letter). Je 834–835

Kay SR, Opler LA: Positive and negative subtypes in schizophrenia (letter). Oc

Kazamatsuri H see Binder RL Kazdin AE see Last CG

Keck PE Jr, Pope HG Jr, McElroy SL: Frequency and presentation of neuroleptic malignant syndrome: prospective study. Oc 1344–1346 Keefe N see Zubenko GS

Keefe RSE, Mohs RC, Losonczy MF, Davidson M, Silverman JM, Kendler KS, Horvath TB, Nora R, Davis KL: Characteristics of very poor outcome schizo-phrenia. Jy 889–895

Keefe RSE see Davidson M; Silverman JM Keks NA, Copolov DL, Singh BS: Abnormal prolactin response to haloperidol challenge in men with schizophrenia. Oc 1335-1337

Keller M see Coryell W Kellert SR see Felthous AR Kemph JP see Bartucci RJ

Kendall EM, Jenkins PL: Koro in American man (letter). De 1621

Kendler KS: reply to GS Layne: Co-occurrence of schizophrenia and affective disorders (letter). Ap 533

Kendler KS see Keefe RSE Kennedy ME see Jaffe K

Kerbeshian J, Burd L: More on Ganser's syndrome and DSM-III (letter). Ja 119-120

Kerbeshian J see Burd L Kerler R see Vieweg V Kernberg OF see Selzer MA Kerr B see Sackeim HA

Keshavan MS: Clonidine in benzodiazepine withdrawal (letter). Ap 530

Kettering RL, Harrow M, Grossman L,

Meltzer HY: Prognostic relevance of delusions in depression: follow-up study. Se 1154-1160

Kharabi F see Green MF

Khot V, Goodwin J, Wandry G: Time course of effects of clonidine (letter). No 1518-1519

Khuon F see Mollica RF Kincare P see Greenfeld D

King BH, Ford CV: Pseudologia antastica (letter). Jy 970

King LS: bk rev, GL Hobby: Penicillin: Meeting the Challenge. Je 817-818

Kinsbourne M see Bick PÅ Kirby EC: Report of Committee of Tellers

(off acts). Oc 1402

Klein DE, Sullivan G, Wolcott D., Landsverk J, Namir S, Fawzy FI: Changes in AIDS risk behaviors among homosexual male physicians and university students. Je 742–747

Klein DF see Fyer AJ; Fyer MR; (ahn JP Klein E, Uhde TW, Post RM: realy to BA Lawlor: Carbamazepine, alprazolam withdrawal, and panic disorder (letter). Fe

Klein MH see Erdman HP Kligfield P see Shear MK

Kling AS, Metter EJ, Riege WH, Kuhl DE: reply to MS Buchsbaum: Hypofrontality in schizophrenia as assessed by PET (letter). Ja 122–123 Kling MA see Calabrese JR

Klinger RL see Strang JP

Kluft RP: First-rank symptoms as diagnostic clue to multiple personality disorder. Mr 293-298 (letter: Fox, Oc 1377-1378)

Kluft RP: reply to HA Fox: Schneider's first-rank symptoms (letter). O: 1378

Kluft RP: reply to O French; P Chodoff: More on multiple personality disorder (letters). Ja 124–125

Klykylo WM: bk rev, M Rutter, CE Izard, PB Read (eds): Depression in Young People: Developmental and Clinical Perspectives. No 1505

Klykylo WM: bk rev, D Shaffer, AA Ehrhardt, LL Greenhill (eds): The Clinical Guide to Child Psychiatry. Se 1236-

Knapp PH see Seidman LJ Knee D see Biederman J

Knesper DJ, Pagnucco ĎJ: Estimated distribution of effort by providers of mental health services to US adults in 1982 and 1983. Jy 883–888

Knutsen EJ see Hargreaves WA

Kocsis JH, Frances AJ: Critical discussion of DSM-III dysthymic disorder. De 1534-1542

Koczapski AB, Ibraheem S, Ashby YT, Paredes J, Jones BD, Ancill R: Early diagnosis of water intoxication by monitoring variations in body weight (letter). De 1626

Koenigsberg HW, Handley R: teply to M Stitelman: Expressed emotion (letter). Au 1112

Koenigsberg HW see Hellerstein D; Selzer

Kolakowska T, Molyneux SG: Platelet serotonin concentration in schizophrenic patients. Fe 232-234

Kolb B see Pitman RK

Kolb LC: Neuropsychological hypothesis explaining posttraumatic stress disorders. Au 989-995

Koppelman MCS, Parry BL, Hamilton JA, Alagna SW, Loriaux DL: Effect of bromocriptine on affect and libido in hyperprolactinemia. Au 1037-1041

Koslow SH see Secunda SK; Stokes PE Koss JD: Expectations and outcomes for patients given mental health care or spiritist healing in Puerto Rico. Ja 56-61

Kosten TR see Rounsaville BJ

Koyama T, Lowy MT, Meltzer HY: 5-Hydroxytryptophan-induced cortisol response and CSF 5-HIAA in depressed patients. Mr 334-337

Kraus RP, Hux M, Grof P: Psychotropic drug withdrawal and dexamethasone suppression test. Ja 82-85

Krol PA see Bryer JB

Kruesi MJP, Rapoport JL, Cummings EM, Berg CJ, Ismond DR, Flament M, Yarrow M, Zahn-Waxler C: Effects of sugar and aspartame on aggression and activity in children. No 1487-1490

Kubacki A: Time and meaning of human experience (letter). My 693-694 (letter:

Bromberg, Oc 1364) Kudler H, Davidson J, Meador K, Lipper S, Ely T: DST and posttraumatic stress disorder. Au 1068–1071

Kugelmass S see Shapira B Kuhl DE see Kling AS

Kupfer DJ, Frank E: Relapse in recurrent unipolar depression. Ja 86-88

Kupfer DJ see Frank E; Thase ME

Kutcher SP, MacKenzie S, Galarraga W, Szalai J: Clonazepam treatment of adolescents with neuroleptic-induced akathisia (letter). Je 823-824

Ladenheim JA see George DT Landsverk J see Klein DE; Yager J

Lane RD, Schwartz GE: Levels of emotional awareness: cognitive-developmental theory and its application to psychopathology. Fe 133-143; correction, Ap 542

Langsley DG: New American Board of Medical Specialties publications (letter). Mr 383

Langsley DG see Yager J

Lansky MR: bk rev, A Goldberg (ed): Progress in Self Psychology, vol 1. No 1500-

Lansky MR: bk rev, JJ Zilbach: Young Children in Family Therapy. No 1506

Laor N: reply to JM Gorman: Comment on review of The Foundations of Psychoanalysis (letter). Fe 257

Laor N see Oren DA

Laporta M, Chouinard G, Goldbloom D, Beauclair L: Hypomania induced by sertraline, a new serotonin reuptake inhibitor (letter). No 1513-1514

Laraia MT see Lydiard RB

Last CG, Francis G, Hersen M, Kazdin AE, Strauss CC: Separation anxiety and school phobia: comparison using DSM- III criteria. My 653-657

Last CG, Hersen M, Kazdin AE, Francis G, Grubb HI: Psychiatric illness in mothers of anxious children. De 1580-1583

Laufer RS, Brett E, Gallops MS: Dr Laufer and colleagues respond to letter about their article on posttraumatic stress disorder (letter). Je 822

Lavelle J see Mollica RF

Lavie P see Hefez A Lavori PW see McEvoy JP

Lawlor BA: Carbamazepine, alprazolam withdrawal, and panic disorder (letter).

Fe 265-266

Lawlor BA, Stewart JT: AIDS delusions: a symptom of our times (letter). Se 1244 Layne GS: Co-occurrence of schizophrenia

and affective disorders (letter). Ap 533

Lazarus LW, Newton N, Cohler B, Lesser J, Schweon C: Frequency and presentation of depressive symptoms in patients with primary degenerative dementia. Ja 41-45; correction, Ap 542 (letters: Siegel; Drinka, Oc 1368-1369)

Lazarus LW, Newton N, Cohler B, Lesser J, Schweon C: reply to B Siegel; PJ Drinka: Dementia and depression (letters). Oc

Leaf PJ see Fenton WS; Sledge WH

LeBegue B: Mania precipitated by flu-oxetine (letter). De 1620

Leckman JF, Pajer K: bk rev, C Pfeffer: The Suicidal Child. No 1505-1506

Lee KK see Branchey L; Greenberg WM Leichner P: Treatment of anorexia nervosa (letter). Fe 260

Leonard HL, Rapoport JL: Relief of obsessive-compulsive symptoms by LSD and psilocin (letter). Se 1239-1240

Leong GB: Outpatient civil commitment (letter). My 694-695

Lerer B, Ebstein RP, Shestatsky M, Shemesh Z, Greenberg D: Cyclic AMP signal transduction in posttraumatic stress disorder. Oc 1324-1327

Lerer B see Shapira B

Lesaca T: Amoxapine and neuroleptic malignant syndrome (letter). No 1514

Lesieur HR, Blume SB: South Oaks Gambling Screen (SOGS): new instrument for identification of pathological gamblers. Se 1184-1188

Lesser J see Lazarus LW Leung P see Maricle R

Levenson AI: Report of Treasurer (off acts). Oc 1388-1390

Levenson JL: Psychiatrist-patient sexual contact (letter). Ap 529-530

Levi LS see Hillard JR Levin A see Fyer AJ

Levine MA see Goodban NA

Levine PE see Nurnberg HG

Levine SB: bk rev, M Segal (ed): Psychopharmacology of Sexual Disorders.

Au 1093 Levinson DF, Levitt MEM: Schizoaffective mania reconsidered. Ap 415-425

Levitt MEM see Levinson DF

Levy AB, Stern SL: DST and TRH stimulation test in mood disorder subtypes. Ap 472-475

Levy NB: bk rev, W Dorfman, L Cristofar (eds): Psychosomatic Illness Review. Fe 245-246

Levy NB: bk rev, PL Gildenberg, RA DeVaul: The Chronic Pain Patient: Evaluation and Management. Ja 118

Lewis DO, Comite F, Mallouh C, Zadunaisky L, Hutchinson-Williams K, Cherksey BD, Yeager C: Bipolar mood disorder and endometriosis: preliminary findings. De 1588-1591

Libert C see Dupuis B

Lieber AL: Treatment of rapid cycling bipolar patients (letter). De 1619-1620

Lieberman JA: bk rev, GD Burrows, TR Norman, L Dennerstein (eds): Clinical and Pharmacological Studies in Psychiatric Disorders. Au 1093-1094

Lieberman KW see Alexopoulos GS

Lieberman MA: Effects of large group awareness training on participants' psychiatric status. Ap 460-464

Lieberman PB see Goodban NA

Liebowitz MR: Globus hystericus and panic attacks (letter). Mr 390-391

Liebowitz MR see Fyer AJ; Fyer MR Lin S see Rahav M

Lin S-C, Hsu T, Fredrickson PA, Richelson E: Yohimbine- and tranylcypromine-induced postural hypotension (letter). Ja

Lindenmayer J-P: bk rev, R Cancro, SR Dean (eds): Research in the Schizophrenic Disorders: The Stanley R Dean Award Lectures, vol 1; R Cancro, SR Dean (eds): Research in the Schizophrenic Disorders: The Stanley R Dean Award Lectures, vol 2. Fe 243-244

Lindenmayer J-P see Kay SR Ling W see Milby JB

Lingiardi V see Moscarelli M Lipper S see Kudler H

Lipsedge MS, Prothero W: Clonidine and clomipramine in obsessive-compulsive disorder (letter). Jy 965–966

Lipsey JR see Robinson RG

Lipton JE: bk rev, L Grinspoon (ed): The Long Darkness: Psychological and Moral Perspectives on Nuclear Winter. Je 816

Liptzin B see Borson S; Mitchell JB Liskow B: bk rev, M Galanter (ed): Recent Developments in Alcoholism, vol 4. Se 1235

Livesley WJ: Systematic approach to delineation of personality disorders. Je 772-

Localio R see Gartrell N; Herman J; Herman IL

Locascio J see Meltzer HY

Loewenstein RJ, Hamilton J, Alagna S, Reid N, deVries M: Experiential sampling in study of multiple personality disorder. Ja 19-24

Loiselle RH see Giannini AJ

Loosen PT, Marciniak R, Thadani K: TRH-induced TSH response in healthy volunteers: relationship to psychiatric history. Ap 455-459

Loriaux DL see Koppelman MCS

Losonczy MF see Davidson M; Keefe RSE; Silverman JM

Lothstein LM: bk rev, R Stoller: Presentations of Gender. Ja 112-113

Lousberg H see van den Hout MA Lowy MT see Koyama T

Luborsky L see Woody GE

Lucas PB, Gardner DL, Wolkowitz OM, Cowdry RW: Dysphoria associated with methylphenidate infusion in borderline personality disorder. De 1577-1579

Luchins DJ see Goldman MB Lycaki H see Chapin K

Lydiard RB, Howell EF, Laraia MT, Ballenger JC: Sexual side effects of alprazolam (letter). Fe 254-255

Lydiard RB, Laraia MT, Ballenger JC, Howell EF: Emergence of depressive symptoms in patients receiving alprazolam for panic disorder. My 664-

Lyons JS see Fulop G

Maany I, O'Brien CP, Woody G: Interaction between thioridazine and naltrexone (letter). Jy 966

Maany I, Woody G, Foulks E: Nicotine and panic attacks (letter). Fe 255

Maas JW see Stokes PE

McAllister JA see Kashani JH

McAllister TW see Green RL

McChesney CM see Noyes R Jr

McCormack A see Burgess AW

McCormick RA see Taber JI

McCue M see McEvoy JP

McCue RE see Georgotas A

McCullough L see Vaillant GE

McDermott JF Jr, Waldron JA, Char WF, Ching J, Izutsu S, Mann E, Ponce DE, Fukunaga C: New female perceptions of parental power. Au 1086–1087

McElroy C see Seidman LJ McElroy SL see Keck PE Jr

McEvoy JP, McCue M, Spring B, Mohs RC, Lavori PW, Farr RM: Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. My 573-57

McEvoy JP, Simpson GM: Dystonia, neuroleptic dose, and anticholinergic drugs (letter). Mr 393

McGlashan TH see Fenton WS McGrath PJ see Berman CW

McGuire TG, Dickey B, Shively GE, Strumwasser I: Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system. My 616-620

Machtinger PE see Erdman HP

McIntyre JS: Report of Committee on Membership (off acts). Oc 1399-1402

McKegney FP: Hallucinations as conversion symptoms (letter). My 696

MacKenzie S see Kutcher SP

McLellan AT see Milby JB; Woody GE McNiel DE, Binder RL: Predictive validity of judgments of dangerousness in emergency civil commitment. Fe 197-200

McNiel DE see Binder RL

Maddock R: Panic disorder and phobic avoidance (letter). De 1625

Maffei C see Moscarelli M

Magni G, di Mario F, Bernasconi G, Mastropaolo G: DSM-III diagnoses associated with dyspepsia of unknown cause. Se 1222-1223

Magulac M see Glassman JNS

Mai FM: reply to P Castelnuovo-Tedesco: Denial in recipients of heart transplants (letter). Ap 533

Maier GJ see Whitman JR
Malenka RC: Clinician-researchers in psychiatry (letter). Ap 535-536

Malinakova I see Zubenko GS

Malitz S see Sackeim HA

Mallouh C see Lewis DO

Malmquist CP: bk rev, MP Maloney: A Clinician's Guide to Forensic Psychological Assessment. My 681-682

Malo J-L see Monday J

Manderscheid RW: Long-term perspectives on persons with chronic mental disorder (editorial). Je 783-784

Mann E see McDermott JF Jr

Mann JJ see Markowitz J; Shear MK; Weiden PJ

Mann SC, Caroff SN: reply to LB Kalinowsky: Lethal catatonia and neuroleptic malignant syndrome (letter). Au 1106-

Mann SC, Caroff SN: reply to RA Munoz: Neuroleptic malignant syndrome and lethal catatonia (letter). Oc 1370

Manning WG Jr, Wells KB, Benjamin B: Use of outpatient mental health services over time in health maintenance organization and fee-for-service plans. Mr 283-287

Manschreck T see Beckett A Marciniak R see Loosen PT

Marco L see Velek M

Maricle R, Leung P, Bloom JD: Use of DSM-III axis III in recording physical illness in psychiatric patients. No 1484-1486

Marke J see Saravay SM

Markowitz J, Brown R, Sweeney J, Mann JJ: Reduced length and cost of hospital stay for major depression in patients treated with ECT. Au 1025-1029

Markowitz JC: bk rev, PE Stepansky (ed): Freud: Appraisals and Reappraisals. My

Marks IM: Behavioral aspects of panic disorder. Se 1160-1165 Marshall V see Hsu K

Martinez J see Fyer MR

Mastropaolo G see Magni G

Mathew RJ, Wilson WH, Nicassio PM: Cerebral ischemic symptoms in anxiety disorders (letter). Fe 265

Mattick R see Andrews G

Mattson M see Weiden PJ

Matuzas W, Al-Sadir J, Uhlenhuth EH, Glass RM: Mitral valve prolapse and thyroid abnormalities in patients with panic attacks. Ap 493-496

Mavissakalian M, Perel J, Bowler K, Dealy R: Trazodone in treatment of panic disorder and agoraphobia with panic attacks. Je 785-787

Mayfield D: bk rev, B Stimmel (ed): Alcohol and Substance Abuse in Adolescence. Ja 114-115

Mayo JP see Garbutt JC

Maziade M, Côté R, Boutin P, Bernier H, Thivierge J: Temperament and intellectual development: longitudinal study from infancy to four years. Fe 144-150

Meador K see Kudler H

Meador-Woodruff JH, Greden JF: Clinician-researchers in psychiatry (letter). Ap

Meehan B see Hellerstein DJ

Meehan MC: bk rev, CZ Stearns, PN Stearns: Anger: The Struggle for Emotional Control in America's H story. De 1612

Meller WH: bk rev, HA Pincus, H Pardes (eds): The Integration of Neuroscience and Psychiatry. Mr 370-371

Mellman TA, Uhde TW: Obsersive-com-

pulsive symptoms in panic disorder. De 1573-1576

Mellow AM see Sunderland T

Meltzer HY: bk rev, AR Green (ed): Neuropharmacology of Serctonin. Se 1233

Meltzer HY, Locascio J: Positive and negative subtypes in schizophrenia (letter). Oc 1366-1367

Meltzer HY see Kettering RL; Koyama T Menninger RW see Gabbard GO

Menolascino FJ see Ruedrich SL

Merrill RD, Garfinkel B: Unexpected consequence of treatment for attention deficit disorder (letter). Fe 250

Mesulam M-M: Lidocaine toxicity and limbic system (letter). De 162.;

Mesulam MM see Pitman RK

Metter EJ see Kling AS

Metz L see Hefez A

Meyer JE, Meyer R: reply to R Charach: Poetry and psychopathology (letter). No

Meyer J-E, Meyer R: Self-portrayal by depressed poet: contribution to clinical biography of William Cowper. Le 127-132 (letter: Charach, No 1521)

Meyer R see Meyer JE; Meyer J-E
Meyer RE: bk rev, RG Smart, HD Cappell,
FB Glaser, Y Israel, H Kalant, RE
Popham, W Schmidt, EM Sellers (eds): Research Advances in Alcoho and Drug Problems, vol 8. Se 1235-1236

Meyerkopf N see Glick ID

Michael RP, Zumpe D: reply to J Ronat: Seasonal change in aggressivity (letter). Je 824-825

Michels R: bk rev, P Gay: Freud for Historians. Ja 111-112

Michels R see Perry S

Mikulincer M see Solomon Z

Milby JB, Gurwitch RH, Wiebe DJ, Ling W, McLellan AT, Woody Ga: reply to RG Newman: Fear of metha-lone main-

tenance (letter). Mr 394-395
Miklowitz DJ, Velligan DI: bk rev, JG
Howells, WR Guirguis: The Jamily and Schizophrenia. Jy 960

Miller DJ see Goldstein G

Miller JB see Bryer JB

Miller M see Shukla S

Miller MG see Shukla S

Mills MJ, Sullivan G, Eth S: Protecting third parties: decade after Tarasoff. Ja 68-74 (letter: Raskin, Au 11)7)

Mills MJ, Sullivan G, Eth S: reply to DE Raskin: Duty to protect letter). Au 1107-1108

Mills MJ see Altshuler LL

Milman DH, Qazi QH: Comment on APA position statement on psychoactive substance use (letter). No 1515

Minichiello WE see Baer L Minkoff L see Rosenthal J

Minshew NJ: bk rev, MM Mesulam (ed): Principles of Behavioral Neurology. Oc 1351

Mitchell JB, Dickey B, Liptzin B, Sederer LI: Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. My 610-615

Mitchell JB see Freiman MP

Mitchell P: Heroin-induced vomiting in bulimia (letter). Fe 249-250

Mitchell PB, Smythe GA: Growth hormone response to clonidine in depression (letter). My 690-691

Moffic HS: What about bicameral mind? (letter). My 696

Mohl PC, Huang L, Bowden C, Fischbach M, Vogtsberger K, Talal N: Natural killer cell activity in major depression (letter). De 1619

Mohs RC see Davidson M; Davis KL; Greenwald BS; Kanof PD; Keefe RSE; McEvoy JP; Silverman JM; Weiner MF

Mollica RF, Wyshak G, de Marneffe D, Khuon F, Lavelle J: Indochinese versions of Hopkins Symptom Checklist-25: screening instrument for psychiatric care of refugees. Ap 497-500

Mollica RF, Wyshak G, Lavelle J: Psychosocial impact of war trauma and torture on Southeast Asian refugees. De 1567-

Molyneux SG see Kolakowska T Monday J, Montplaisir J, Malo J-L: Dream process in asthmatic subjects with nocturnal attacks. My 638-640

Montplaisir J see Monday J

Morgan JP: Carry-over effects of marijuana (letter). Fe 259-260

Morice R: bk rev, DJ Hand: Artificial Intelligence and Psychiatry. Oc 1352-1353

Morris H, Gunderson JG, Zanarini MC: reply to Adler; Goodwin: Transitional object use and borderline personality (letters). Se 1251

Morrison AP: More on The Ego Ideal (letter). Ap 528

Morrison E see DeRosis H

Moscarelli M, Maffei C, Cesana BM, Boato P, Farma T, Grilli A, Lingiardi V, Cazzullo CL: International perspective on assessment of negative and positive symptoms in schizophrenia. De 1595-

Mosher LR: bk rev, R Warner: Recovery From Schizophrenia: Psychiatry and Political Economy. Jy 956-957

Mossman D: Coerced outpatient treatment (letter). Jy 968

Mossman D: Lithium-responsive depressed patients (letter). Mr 392

Mueller EA see Sunderland T

Mueser KT, Butler RW: Auditory hallucinations in combat-related chronic posttraumatic stress disorder. Mr 299-302

Mukherjee S see Shukla S Müller ÓA see Holsboer F

Mumford E, Schlesinger H, Cuerdon T, Scully J: Ratings of videotaped simulated patient interviews and four other methods of evaluating psychiatry clerkship. Mr 316-322

Munir K see Biederman J Munitz H see Hermesh H

Munoz RA: Neuroleptic malignant syndrome and lethal catatonia (letter). Oc 1369-1370

Muqtadir S see Bakhai YD Murphy DL see Sunderland T Murray P see Carlson GA

Myers MF: bk rev, JB Lancaster, J Altmann, AS Rossi, LR Sherrod (eds): Parenting Across the Life Span: Biosocial Dimensions. No 1503

Myers MF: bk rev, M Scarf: Intimate Partners: Patterns in Love and Marriage. No 1504

Myers MF: Psychiatric problems of medical students and their spouses (letter). Ap 541-542

Nabarro G see van Gent EM

Nadelson CC: bk rev, A Alonso: The Quiet Profession: Supervisors of Psychotherapy. Ap 517

Nakdimen KA: Borderline personality and DSM-III (letter). Fe 254

Nakdimen KA: Libido in women receiving trazodone (letter). Ja 123

Namir S see Klein DE

Nansen A see van den Hout MA

Nathanson DL: bk rev, P Buckley (ed): Essential Papers on Object Relations. No 1501-1502

Nelson BA see Bryer JB

Nelson JC: bk rev, P Willner: Depression: A Psychobiological Synthesis. Jy 962

Nemeroff CB see Banki CM; Haggerty JJ Jr Nemiah JC: bk rev, WF Bynum, R Porter, M Shepherd (eds): The Anatomy of Madness: Essays in the History of Psychiatry, vol I: People and Ideas; The Anatomy of Madness: Essays in the History of Psychiatry, vol II: Institutions and Society. De 1610-1611

Nemiah JC: Editor's new year's greetings (editorial). Ja 75-81

Nemiroff RA see Colarusso CA

Ness DE: Transitional day hospitalization (letter). No 1520

Newhouse PA see Sunderland T

Newman RG: Fear of methadone maintenance (letter). Mr 394

Newton N see Lazarus LW

Nicassio PM see Mathew RJ

Nininger J see Borson S

Nishimura T see Binder RL Nora R see Keefe RSE

Nordlie JW see Fulop G

Noyes R: bk rev, M Mavissakalian, SM Turner, L Michelson (eds): Obsessive-Compulsive Disorder: Psychological and Pharmacological Treatment. Fe 242

Noyes R Jr: bk rev, DW Goodwin: Anxiety. Oc 1356

Noyes R Jr, Clarkson C, Crowe RR, Yates WR, McChesney CM: Family study of generalized anxiety disorder. 1019-1024

Noyes R Jr see Reich J

Nurnberg HG, Levine PE: Spontaneous remission of MAOI-induced anorgasmia. Je 805-807

Nurnberger J Jr, Simmons-Alling S: Mediation of "calcium antagonist" effects by dopamine receptor blockade (letter). Jy 966-967

Nutt DJ see George DT

0

O'Brien CP see Maany I; Woody GE

O'Brien PJ: Prevalence of neuroleptic malignant syndrome (letter). Oc 1371

O'Connor L see Banki CM

Offer D see Holinger PC O'Gorman T see Reich J

Okin RL: reply to JL Geller: Voluntary and involuntary patients (letter). Au 1113

Olarte S see Gartrell N; Herman J; Herman

Olfson M: Weir Mitchell and lithium bro-

mide (letter). Au 1101-1102

Opler LA see Kay SR

Opton EM Jr: bk rev, M Roth, R Bluglass (eds): Psychiatry, Human Rights and the Law. My 680

Oremland JD: bk rev, H Trosman: Freud and the Imaginative World. My 678

Oren DA, Laor N: Self-inflicted eye injury (letter). Fe 248-249

Orr SP see Pitman RK

Ortiz A see Rainey JM Jr

Ostow M: Polypharmacy (letter). Je 825-

Ostrov E see Holinger PC Overall JE see Volkow ND

Pagnucco DJ see Knesper DJ Pajer K see Leckman JF

Palmstierna T, Wistedt B: Absence of acquired tolerance to neuroleptics in schizophrenic patients. Au 1084-1085 Pardes H: Council on Research (off acts).

Mr 413-414

Pardes H see Burke JD Jr; Pincus HA Paredes J see Koczapski AB

Parker G: bk rev, P Blos: Son and Father: Before and Beyond the Oedipus Complex. Ja 110-111

Parkin-Feigenbaum L see Emslie GJ Parkinson DK see Dew MA

Parry BL, Rosenthal NE, Tamarkin L, Wehr TA: Treatment of patient with seasonal premenstrual syndrome. Je 762-

Parry BL, Wehr TA: Therapeutic effect of sleep deprivation in patients with premenstrual syndrome. Je 808-810

Parry BL see Koppelman MCS

Pary R see Turns DM

Pasnau RO: bk rev, ZJ Lipowski: Psychosomatic Medicine and Liaison Psychiatry: Selected Papers. Fe 246-247

Pasnau RO: Presidential address: psychiatry in medicine: medicine in psychiatry. Au 975-980

Pastor LH: bk rev, HH Goldman (ed): Review of General Psychiatry. My 684–685

Paul SM see Amsterdam JD; Breier A; Wolkowitz OM

Pearlson G see Rabins P

Pearlson GD: bk rev, CL Cazzullo, G Invernizzi (eds): Schizophrenia: An Integrative View. Jy 955-956

Pechacek TF see Hughes JR

Peele R: bk rev, D Abrahamsen: Confessions of Son of Sam. Mr 380-381

Peele R: bk rev, SE Shortt: Victorian Lunacy: Richard M Bucke and the Practice of Late Nineteenth-Century Psychiatry. De 1612

Peele R: Report of Speaker (off acts). Oc 1393-1396

Peet T see Golinger RC

Pence G: bk rev, A Carmi, S Schneider, A Hefez (eds): Psychiatry, Law and Ethics. My 680-681

Pepper PP, Crovitz HF: More on posttraumatic stress disorder (letter). Fe 253-254

Perel J see Mavissakalian M

Perl E see Siegel B

Perry BD, Giller EL Jr, Southwick SM:
Altered platelet α₂-adrenergic binding sites in posttraumatic stress disorder (letter). No 1511-1512

Perry PJ see True BL

Perry S, Cooper AM, Michels R: Psychodynamic formulation: its purpose, structure, and clinical application. My 543-

Perry SW, Cella DF: Overdiagnosis of depression in the medically ill (letter). Ja 125–126

Perse TL, Greist JH, Jefferson JW, Rosenfeld R, Dar R: Fluvoxamine treatment of obsessive-compulsive disorder. De 1543-1548

Peselow E see Adler LA

Peselow ED: reply to JG Solomon: Usefulness of dexamethasone suppression test (letter). Au 1109-1110

Peselow ED, Baxter N, Fieve RR, Barouche F: Dexamethasone suppression test as monitor of clinical recovery. Ja 30-35 (letter: Solomon, Au 1109)

Petit H see Dupuis B

Pfeffer CR: bk rev, GL Klerman (ed): Suicide and Depression Among Adults and Young Adults. Jy 961

Pfeffer CR: bk rev, E Shneidman: Definition of Suicide. Ja 117-118

Pfohl B see Zimmerman M

Phillips J: bk rev, HF Stein: The Psychodynamics of Medical Practice: Unconscious Factors in Patient Care. Ap 516-

Phillips KA, Vaillant GE, Schnurr P: Some physiologic antecedents of adult mental health. Au 1009-1013

Phillips RA see Fulop G

Pickar D see Amsterdam JD; Breier A; Roy A; Wolkowitz OM

Pickering T see Shear MK

Pilette WL: Pisa syndrome, or pleurothotonus (letter). Jy 969-970 Pillai AK see Salam SA

Pincus HA, Fine T, Pardes H, Goodwin F: reply to SM Wise: Use of animals in research (letter). Au 1111

Pincus HA see Burke JD Jr

Pinta ER, Coffman J, Tolbert H: Informed consent for neuroleptics and other psychotropic agents (letter). Se 1244-1245

Pitman RK, Green RC, Jenike MA, Mesulam MM: Clinical comparison of Tourette's disorder and obsessive-compulsive disorder. Se 1166-1171

Pitman RK, Kolb B, Orr SP, Singh MM: Ethological study of facial behavior in nonparanoid and paranoid schizophrenic patients. Ja 99-102

Pitts FN Jr see Fudenberg HH Platt JJ see Husband SD

Poe RO, Snyder JW, Stubbins JF, Garrettson LK; Psychotic reaction to insect repellent (letter). Au 1103-1104

Pohl R, Balon R, Berchou R, Yeragani VK: Allergy to tartrazine in antidepressants. Fe 237-238 (letter: Hollander, Se 1247)

Pohl R, Balon R, Yeragani VK: More on cocaine and panic disorder (letter). Oc 1363

Pohl R see Balon R; Rainey JM Jr Polakoff S see Sorgi P Polan JJ see Shear MK

Pollock GH: Response to presidential address: opportunities and challenges that confront medicine and its specialties, with special reference to psychiatry. Au 980--985

Pologe B see Tryon WW Ponce DE see McDermott JF Jr Pope HG Jr see Hudson JI; Keck PE Jr Post RM see Klein E

Potkin SG see Halevie-Goldman BD Powers PS: bk rev, DM Garner, PE Garfinkel (eds): Handbook of Psychotherapy for Anorexia Nervosa and Bulimia. Je 821

Powers PS, Schulman RG, Gleghorn AA, Prange ME: Perceptual and cognitive abnormalities in bulimia. No 1456-1460 Poyourow P see Halevie-Goldman BD

Prado A: Proposed changes in DSM-III substance dependence criteria (letter). Fe

Prange ME see Powers PS

Price LH: Mania induced by lithium augmentation (letter). Mr 389

Price LH, Goodman WK, Charney DS, Rasmussen SA, Heninger GR: Treatment of severe obsessive-compulsive disorder with fluvoxamine. Au 1059-1061

Price RA, Cadoret RJ, Stunkard AJ, Troughton E: Genetic contributions to human fatness: adoption study. Au 1003-1008

Price WA, Giannini AJ: Phencyclidine and "crack"-precipitated panic disorder (letter). My 686-687

Pridmore S: bk rev, CM Anderson, DJ Reiss, GE Hogarty (eds): Schizophrenia and the Family: A Practitioner's Guide to Psychoeducation and Management. Oc 1354-1355

Pridmore SA: bk rev, A Kerr, P Snaith: Contemporary Issues in Schizophrenia.

Prothero W see Lipsedge MS Puertollano M see Kahn JP

Pugh DD: Attention deficit disorder and depression (letter). Oc 1366

Pugh R: β -Adrenergic blockers for aggres-

sive behavior in schizophrenia (letter). Ap 538-539

Qazi QH see Milman DH

R

Rabin B see Ganguli R Rabiner CJ see Saravay SM Rabinowitz J see Jenike MA

Rabins P, Pearlson G, Jayaram G, Steele C, Tune L: Increased ventricle-to-brain ratio in late-onset schizophrenia. Se 1216-1218

Rabins P see Borson S Radvan M see Spivak B

Rahav M, Goodman AB, Lin S: reply to SS Feinberg; AN Daghestani: Mental illness in Jerusalem (letters). Je 836-837

Raines JM, Greenspan D: Clorazepam in treatment of chronic schizophrenia (letter). No 1510

Rainey JM see Balon R

Rainey JM Jr, Aleem A, Ortiz A, Yeragani V, Pohl R, Berchou R: Laboratory procedure for induction of flashbacks. Oc 1317-1319

Raja M: Empiricism and DSM-111 (letter). Je 838

Ramchandani D: Utilization of mental health care services (letter). Oc 1371-1372

Ramirez LF: bk rev, SM Sonnenberg, AS Blank Jr, JA Talbott (eds): The Trauma of War: Stress and Recovery in Viet Nam Veterans. Ap 522-523

Ramirez LF see Taber JI

Rapaport MH: Chronic pain and posttraumatic stress disorder (letter). Ja 120 Rapaport MH, Cummings MA, Cummings

KL, Risch SC: Research diagnostic problems (letter). Je 826-827

Rapoport JL see Kruesi MJP; Leonard HL; Zametkin AJ

Raps A see Guy N

Raskin DE: Duty to protect (letter). Au

Rasmussen SA, Tsuang MT: reply to H Hermesh: Obsessive-compulsive disorder and borderline personality disorder (letter). Ja 121-122

Rasmussen SA see Price LH

Ratey J see Sorgi P

Reich J: bk rev, HS Kaplan: Sexual Aversion, Sexual Phobias, and Panic Disorders. Oc 1356

Reich J: bk rev, RJ Lifton: The Nazi Doctors: Medical Killing and the Psychology of Genocide. De 1612-1613

Reich J: bk rev, T Millon, GS Everly Jr: Personality and Its Disorders: A Biosocial Learning Approach. Fe 242-243

Reich J: Sex distribution of DSM-III personality disorders in psychiatric outpatients. Ap 485-488

Reich J, Noyes R: reply to R Maddock: Panic disorder and phobic avoidance (letter). De 1625–1626

Reich J, Noyes R Jr, Hirschfeld R, Coryell W, O'Gorman T: State and personality in

depressed and panic patients. Fe 181-

Reich J, Noyes R Jr, Troughton E: Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Mr 323-326 (letter: Maddock, De 16251

Reid JC see Kashani JH Reid N see Loewenstein RJ

Reimherr FW, Wender PH, Wood DR, Ward M: Open trial of L-tyrosine in treatment of attention deficit disorder, residual type. Au 1071-1073

Reiser DE: bk rev, S Perry, A Frances, J Clarkin: A DSM-III Casebook of Differential Therapeutics: A Clinical Guide to Treatment Selection. Au 1091

Reitano J see Adler LA

Reiter S, Adler L, Erle S, Duncan E: Neuroleptic-induced akathisia treated with pindolol (letter). Mr 383-384

Reiter S see Adler LA

Reynolds CF III: bk rev, M Shepherd (ed): The Spectrum of Psychiatric Research. My 684

Reynolds CF III see Thase ME; Zubenko GS

Richardson B see Jacobson A Richelson E see Lin S-L

Richter MA, Joffe RT: Use of tricyclic antidepressants in patient with malignant hyperthermia (letter). Ap 526

Riege WH see Kling AS

Ries RK: reply to SR Kay: Changing presentation of catatonia (letter). Je 835

Rifkin A: bk rev, D Kemali, G Racagni (eds): Chronic Treatments in Neuropsychiatry: Advances in Biochemical Psychopharmacology, vol 40. Oc 1359-1360

Rifkin A: More on empiricist and his new clothes (letter). My 691-692

Rifkin A: Systems and structure of meaning (letter). Jy 971

Risch SC see Rapaport MH; Schuckit MA Riskin J, Fisch R: Comments on review of brief psychotherapies (letter). No 1517 Ritholz M see Wamboldt FS

Roazen P: bk rev, MH Erdelyi: Psychoanalysis: Freud's Cognitive Psychology. My

Roback HB, Smith M: Patient attrition in dynamically oriented treatment groups. Ap 426-431

Roberts LH: Report of Committee on Constitution and By-Laws (off acts). Oc 1398 Robinowitz CB see Fenton WS

Robinson ML, Jones A: Imipramine treatment of agoraphobia (letter). My 687

Robinson RG: bk rev, JE Harris: Clinical Neuroscience: From Neuroanatomy to Psychodynamics. Mr 371-372

Robinson RG, Lipsey JR: reply to B Van Sweden: Poststroke mood disorders (letter). Oc 1373-1374

Robison MW see Winslow RS

Rodin G, Voshart K: reply to SW Perry: Overdiagnosis of depression in the medically ill (letter). Ja 126

Rodin G, Voshart K: reply to RP Snaith: Defining "depression" (letter). Je 829

Roehrich H, Gold MS: Propranolol as adjunct to clonidine in opiate detoxification (letter). Au 1099-1100

Roffwarg HP see Emslie GJ

Rogers GA, Burke GV: Neuroleptics, prolactin, and osteoporosis (letter). Mr 388-389

Rogers JL see Bloom JD

Rogers KL: bk rev, G Bartholini, KG Lloyd, PL Morselli (eds): GABA and Mood Disorders: Experimental and Clinical Research. Mr 371

Rogers KL: bk rev, HI Yamamura, SJ Enna, MJ Kuhar (eds): Neurotransmitter Receptor Binding, 2nd ed. Se 1234

Rogers KL, Rogers MA: bk rev, ER Kandel, JH Schwartz (eds): Principles of Neural Science, 2nd ed. Mr 370

Rogers KR see Rogers KL Rogers MA see Rogers KL Rombaut P see Van Sweden B

Ronat J: Seasonal change in aggressivity

(letter). Je 824

Roose SP: bk rev, A Dean (ed): Depression in Multidisciplinary Perspective. Ja 116-

Rosenbach ML see Freiman MP Rosenbaum G see Chapin K Rosenberg TK see Kashani JH Rosenfeld R see Perse TL

Rosenthal J, Strauss A, Minkoff L, Winston A: reply to D Mossman: Lithium-responsive depressed patients (letter). Mr 392-

Rosenthal NE see Jacobsen FM; Parry BL;

Rosenthal SH: More on globus hystericus syndrome (letter). Ap 529

Rosnick PB see Samiy AH

Ross LA, Bland WP, Ruskin P, Bacher N: Antiandrogen treatment of aberrant sexual activity (letter). No 1511

Roth LR: Council on Psychiatry and Law (off acts). Mr 411-412

Roth SD see Addonizio G

Rotrosen J see Adler LA

Rounsaville BJ, Kosten TR, Williams JBW, Spitzer RL: Field trial of DSM-III-R psychoactive substance dependence disorders. Mr 351-355

Rounsaville BJ, Spitzer RL, Williams JBW: reply to BM Segal; J Blackwell; A Prado: Proposed changes in DSM-III substance dependence criteria (letters). Fe 259

Roy A, Pickar D, Paul S, Doran A, Chrousos GP, Gold PW: CSF corticotropin-releasing hormone in depressed patients and normal control subjects. My 641–645

Roy A see Breier A

Roy-Byrne PP, Rubinow DR, Hoban MC, Grover GN, Blank D: TSH and prolactin responses to TRH in patients with premenstrual syndrome. Ap 480-484

Rubinow DR see Roy-Byrne PP; Sunderland T

Ruedrich SL, Wadle CV, Sallach HS, Hahn RK, Menolascino FJ: Adrenocortical function and depressive illness in mentally retarded patients. My 597-602

Ruiz P: Council on National Affairs (off acts). Mr 406-408

Rumsey JM: bk rev, E Schopler, GB Mesibov (eds): The Effects of Autism on the Family; L Wing: Autistic Children: A

Guide for Parents and Professionals. My

Rundell JR, Wise MG, Ursano RJ: reply to CS Thomas: AIDS virus and CNS (letter). Ap 537-538

Rush AJ see Emslie GJ Ruskin P see Ross LA Russo AM see Taber JI Ryken T see Strawn K

Sabin T see Seidman LJ Sabshin M: Report of Medical Director (off acts). Oc 1390-1393

Sachs G see Weilburg JB

Sack DA see Jacobsen FM; Wehr TA

Sackeim HA, Decina P, Kanzler M, Kerr B, Malitz S: Effects of electrode placement on efficacy of titrated, low-dose ECT. No 1449-1455

Sacks MH see Sledge WH

Salam SA, Pillai AK, Beresford TP: Lorazepam for psychogenic catatonia. Au 1082-1083

Sallach HS see Ruedrich SL Salomon M see Gardos G Saltzman PR see Greenman DA

Salzman C: bk rev, RM Julien: A Primer of Drug Action, 4th ed. Ap 519

Samiy AH, Rosnick PB: Early identification of renal problems in patients receiving chronic lithium treatment. My 670-672

Samson JA see Vasile RG Sanborn CF see Gadpaille WJ

Sandifer MG: Classification and diagnosis (letter). Fe 252-253

Sandifer MG: Obsessive-compulsive disorder and psychosis (letter). Jy 969

Sapir DG see DePaulo JR Jr

Sarasua MM: Keeping clinician-researcher alive (letter). Fe 262–263

Saravay SM, Marke J, Steinberg MD, Rabiner CJ: "Doom anxiety" and delir-ium in lidocaine toxicity. Fe 159–163 (letters: Silber, Oc 1365; Mesulam, De 1623)

Saravay SM, Marke J, Steinberg MD, Rabiner CJ: reply to M-M Mesulam: Lidocaine toxicity and limbic system (letter). De 1623-1624

Satel SL, Southwick S: Consequences of abrupt reduction of chronic symptoms (letter). Oc 1362

Satz P see Green MF Saxena S: "Simple dissociative disorder": subcategory in DSM-III-R? (letter). Ap 524-525

Saxena S see Tollefson GD Schane MD see Kahn IP Schatz H see Gelber GS Scheftner W see Fawcett Scheftner WA see Clark DC

Scherl DJ: Council on Economic Affairs (off acts). Mr 399-400

Schildkraut JJ see Vasile RG Schlegel A see Goodnick PJ Schlesinger H see Mumford E

Schmauss C, Yassouridis A, Emrich HM: Antipsychotic effect of buprenorphine in schizophrenia. Oc 1340-1342

Schneck JM: Problem solving and creativity during sleep (letter). De 1621-1622

Schneider I: Theory and practice of movie psychiatry. Au 996-1002

Schniebolk S see Gardos G Schnurr P see Phillips KA

Schrader JL: Alaska mental health lands. Ja 107-109

Schuckit MA, Gold E, Risch C: Serum prolactin levels in sons of alcoholics and control subjects. Jy 854-859

Schulberg HC see Dew MA Schulman RG see Powers PS Schulz P see Zubenko GS

Schwab JJ: bk rev, HS Korpell: How You Can Help: A Guide for Families of Psychiatric Hospital Patients. Mr 376

Schwartz GE see Lane RD

Schwartz JM see Brown SR; Jenike MA Schwartz MA, Wiggins OP: Empiricism and DSM-III (letter). Je 837-838

Schwartz MA, Wiggins OP: reply to A Kubacki: Time and meaning of human experience (letter). My 694 Schwartz MA, Wiggins OP: reply to A

Rifkin: Systems and structure of meaning

(letter). Jy 971-972 Schwarzwald J see Solomon Z Schweizer E see Amsterdam ID Schweon C see Lazarus LW

Schwerdt LM: bk rev, E Stover, EO Nightingale (eds): The Breaking of Bodies and Minds: Torture, Psychiatric Abuse, and the Health Professions. Ja 115-116 (letter: Fuerst, Au 1114)

Schwerdt LM: bk rev, DE Zeligs: Moses: A Psychodynamic Study. Se 1230

Schwerdt LM: reply to H Fuerst: Torture and legal system (letter). Au 1114

Scully J see Mumford E

Secunda SK, Swann A, Katz MM, Koslow SH, Croughan J, Chang S: Diagnosis and treatment of mixed mania. Ja 96-98

Sederer LI see Mitchell JB Seeman MV see Seeman P

Seeman P: bk rev, JR Cooper, FE Bloom, RH Roth: The Biochemical Basis of Neuropharmacology, 5th ed. Oc 1357 Seeman P, Seeman MV: bk rev, GD Bur-

rows, TR Norman, B Davies (eds): Antipsychotics: Drugs in Psychiatry, vol 3. Ap 519-520

Segal BM: Proposed changes in DSM-III substance dependence criteria (letter). Fe

Segraves RT: Reversal by bethanechol of imipramine-induced ejaculatory dysfunction (letter). Se 1243-1244

Segraves RT: Treatment of premature ejaculation with lorazepam (letter). Se 1240 Seidman LJ, Sokolove RL, McElroy C, Knapp PH, Sabin T: Lateral ventricular size and social network differentiation in young, nonchronic schizophrenic patients. Ap 512-514

Selzer MA, Koenigsberg HW, Kernberg OF: Initial contract in treatment of borderline patients. Jy 927-930

Senter N see Hargreaves WA Serby M, Chou JC-Y, Franssen EH: Dementia in American-Chinese nursing home population. Je 811-812

Sewitch DE see Thase ME Shahar A see Hermesh H Shakoor B see Bell CC

Shamoian CA see Alexopoulos GS

Shaner A: Compact camcorders for teaching psychiatric interviewing (letter). Se

Shapira B, Lerer B, Gilboa D, Drexler H, Kugelmass S, Calev A: Facilitation of ECT by caffeine pretreatment. Se 1199-

Shapiro AK see Fulop G Shapiro B see Asaad G Shapiro E see Fulop G

Sharfstein SS: bk rev, D Mechanic: From Advocacy to Allocation: The Evolving American Health Care System. Je 818

Sharfstein SS see Goldman HH

Shear MK, Kligfield P, Harshfield G, Devereux RB, Polan JJ, Mann JJ, Pickering T, Frances AJ: Cardiac rate and rhythm in panic patients. My 633-637

Sheehan DV: bk rev, S Agras: Panic: Facing Fears, Phobias, and Anxiety. Oc 1356-

Sheeley WF: Francis Bacon and DSM-III (letter). Mr 385

Shellow R: Council on Internal Organization (off acts). Mr 401

Shelly C see Goldstein G Shelton RC see Berman KF Shemesh Z see Lerer B Sher I see Tucker L Shestatsky M see Lerer B

Shine M see Spivak B Shively GE see McGuire TG

Shore D: bk rev, DP Farrington, J Gunn (eds): Aggression and Dangerousness; CD Webster, MH Ben-Aron, SJ Hucker (eds): Dangerousness: Probability and Prediction, Psychiatry and Public Policy. Mr 378-379

Shore D: bk rev, CS North: Welcome, Silence: My Triumph Over Schizophrenia. De 1614

Shrier D see Johnson RL Shrivastava R see Brown WA

Shrivastava RK, Siegel HI: reply to JM Claman: Thioridazine for peptic ulcer disease? (letter). Mr 392

Shukla S, Cook B, Mukherjee S, Godwin C, Miller M: reply to CC Bell: Mania and head trauma (letter). Oc 1379

Shukla S, Cook BL, Mukherjee S, Godwin C, Miller MG: Mania following head trauma. Ja 93-96 (letter: Bell, Oc 1378-

Shumway M see Hargreaves WA

Sider RC: bk rev, HT Engelhardt Jr: The Foundations of Bioethics. Je 815–816

Siegal A: bk rev, P Starr: The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry. Mr 373-374 Siegel B, Perl E, Gurevich D: Dementia and

depression (letter). Oc 1368

Siegel C see Zito JM Siegel HI see Shrivastava RK

Siever LJ see Davidson M

Silber T, D'Angelo L: Doom anxiety and Hoigne's syndrome (letter). Oc 1365

Silver LB: Council on Children, Adolescents, and Their Families (off acts). Mr

Silverman JM, Mohs RC, Davidson M, Losonczy MF, Keefe RSE, Breitner JCS,

Sorokin JE, Davis KL: Familial schizophrenia and treatment response. Oc 1271-1276

Silverman JM see Keefe RSE

Simmons-Alling S see Nurnberger J Jr Simon J: bk rev, GI Fogel, FM Lane, RS Liebert (eds): The Psychology of Men: New Psychoanalytic Perspectives. Se 1226-1227

Simon JS see Haggerty JJ Jr Simpson GM see McEvoy IP Singh BS see Keks NA Singh MM see Pitman RK Skwerer RA see Jacobsen FM Skwerer RG see Wehr TA

Slaby AE: Comments on review of brief

psychotherapies (letter). No 1516 Sledge WH, Leaf PJ, Sacks MH: Applicants' choice of residency training program. Ap

Slomowitz M see Hillard JR

Slovenko R: bk rev, R Reisner: Law and the Mental Health System: Civil and Criminal Aspects. Mr 379

Slovenko R: bk rev, DH Schetky, EP Benedek (eds): Emerging Issues in Child Psychiatry and the Law. Au 1098

Smith M see Roback HB Smith TL see Irwin M Smoller JW see Stunkard AJ Smythe GA see Mitchell PB

Snaith RP: Defining "depression" (letter). Je 828-829

Snyder JW see Poe RO

Snyder S: reply to BH King: Pseudologia fantastica (letter). Jy 970-971

Sokolove RL see Seidman LJ

Solnit AJ: bk rev, DN Stern: The Interpersonal World of the Infant: A View From Psychoanalysis and Developmental Psychology. No 1508-1509

Soloff PH see Zubenko GS

Solomon IG: Usefulness of dexamethasone suppression test (letter). Au 1109

Solomon Z, Garb R, Bleich A, Grupper D: Reactivation of combat-related posttraumatic stress disorder. Ja 51-55

Solomon Z, Weisenberg M, Schwarzwald J, Mikulincer M: Posttraumatic stress disorder among frontline soldiers with combat stress reaction: 1982 Israeli experience. Ap 448-454

Solyom L: Soviet view of paranoid disorder

(letter). Ap 531-532 Soper HV see Green MF

Sorgi P, Ratey J, Polakoff S: reply to JR Whitman; R Pugh: β-Adrenergic blockers for aggressive behavior in schizophrenia (letters). Ap 539

Sorokin JE see Silverman JM Southwick S see Satel SL Southwick SM see Perry BD Speechley KN see Avison WR Spence ND see Goldney RD

Spital M: More on empiricist and his new clothes (letter). My 691

Spitzer RL see Rounsaville BJ

Spivak B, Radvan M, Shine M: Postural hypotension with syncope possibly precipitated by trazodone (letter). No 1512-

Spradlin W see Vieweg V Spring B see McEvoy IP

Stack LS, Haldipur CV, Thompson M: Stressful life events and psychiatric hospitalization of mentally retarded patients. My 661-663

Stalla GK see Holsboer F Stanford GK see Velek M Stangl D see Zimmerman M Steele C see Rabins P

Steinberg MD see Saravay SM Steinberg S see Chouinard G

Steiner W see Chouinard G

Sterman AB see Coyle PK

Stern R: bk rev, PE Stepansky, A Goldberg (eds): Kohut's Legacy: Contributions to Self Psychology. Se 1227–1229

Stern SL see Levy AB

Sternberg DE: reply to Adityanjee: Neuroleptic malignant syndrome: facts and controversies (letter). Au 1104-1105

Stevens MA see Harris SE

Stevens JR, Suddath R: bk rev, NC Andreasen (ed): Can Schizophrenia Be Localized in the Brain? Fe 243

Stewart JT see Bartucci RJ; Lawlor BA Stewart JW see Berman CW; Harrison W Stewart MA see Behar D

Stier SD: bk rev, K Kressel: The Process of Divorce: How Professionals and Couples Negotiate Settlements. Mr 379-380

Stillner V see Winslow RS Stinnett JL see Stunkard AJ

Stitelman M: Expressed emotion (letter). Au 1111-1112

Stocks JT see Thyer BA

Stokes PE, Maas JW, Davis JM, Koslow SH, Casper RC, Stoll PM: Biogenic amine and metabolite levels in depressed patients with high versus normal hypothalamic-pituitary-adrenocortical activity. Jy 868–872 Stoll PM see Stokes PE

Stone AA: bk rev, J-P Sartre: The Freud Scenario; edited by J-B Pontalis; translated by Quintin Hoare. De 1608-1609

Stone MH: Homosexuality in patients with borderline personality disorder (letter). De 1622

Strahl MO: Empiricism and DSM-III (letter). Je 837

Strain JJ see Fulop G

Strang JP, Klinger RL: Symptom definition in evaluation of globus (letter). Oc 1379–1380

Strauss A see Rosenthal J Strauss CC see Last CG Strauss JS see Harding CM Strauss M see DeRosis H

Strawn K, Ryken T, Black DW: Extreme haircutting and psychosis (letter). Au 1102–1103

Strayhorn JM Jr: Control groups for psychosocial intervention outcome studies. Mr 275-282

Streim JE see Drinka PJ Struening EL see Susser E Strumwasser I see McGuire TG Stubbins JF see Poe RO

Stunkard AJ, Stinnett JL, Smoller JW: reply to P Ernsberger: Complications of surgical treatment of obesity (letter). Je 834

Stunkard AJ see Price RA

Su L see Yang L

Suddath R see Stevens JR

Sullivan G: Increased libido with trazodone (letter). Jy 967

Sullivan G see Klein DE; Mills MJ

Summergrad P see Beckett A; Brown SR; Ienike MA

Sunderland T, Rubinow DR, Tariot PN, Cohen RM, Newhouse PA, Mellow AM, Mueller EA, Murphy DL: CSF somatostatin in patients with Alzheimer's disease, older depressed patients, and agematched control subjects. Oc 1313-1316

Susman VL see Addonizio G

Susser E, Struening EL, Conover S: Child-hood experiences of homeless men. De 1599-1601

Swann A see Secunda SK Swann AC see Edlund MJ

Swanson DW: reply to L Solyom: Soviet view of paranoid disorder (letter). Ap 532

Swayze V: bk rev, F Leporé, M Ptito, HH Jasper (eds): Two Hemispheres-One Brain: Functions of the Corpus Callosum. Oc 1351-1352

Sweeney J see Markowitz J

Sweeney MA see Eisendrath SJ

Swift M: Family history in clinical psychiatric practice (editorial). My 628-629

Swift WI see Wamboldt FS Swinson RP see Joffe RT Szalai J see Kutcher SP

Taber JI, McCormick RA, Russo AM, Adkins BJ, Ramirez LF: Follow-up of pathological gamblers after treatment. Je 757–761

Talal N see Mohl PC Tamarkin L see Parry BL Tariot PN see Sunderland T

Tarjan G: bk rev, FJ Menolascino, JA Stark (eds): Handbook of Mental Illness in the Mentally Retarded. Fe 244-245

Tarter RE: bk rev, S Zimberg, J Wallace, SB Blume (eds): Practical Approaches to Alcoholism Psychotherapy, 2nd ed. Fe 240-241

Taylor MA see Abrams R

Tennant C, Goulston K, Dent O: reply to IP Burges Watson: Posttraumatic stress disorder in Japanese prisoners of war (letter). Au 1110-1111

Tennant FS Jr: Inadequate plasma concentrations in some high-dose methadone maintenance patients. Oc 1349-1350

Tennant FS Jr, Wild J: Naltrexone treatment for postconcussional syndrome. Je

Thackrey M: bk rev, S Bloch, E Crouch: Therapeutic Factors in Group Psychotherapy. Au 1089-1090

Thadani K see Loosen PT

Thase ME, Reynolds CF III, Glanz LM, Jennings JR, Sewitch DE, Kupfer DJ, Frank E: Nocturnal penile tumescence in depressed men. Ja 89–92

Thielman SB: bk rev, G Cocks: Psychotherapy in the Third Reich: The Göring Institute. Mr 373

Thienhaus OJ, Zemlan FP, Bienenfeld D, Hartford JT, Bosmann HB: Growth hormone response to edrophonium in Alzheimer's disease. Au 1049-1052

Thivierge J see Maziade M

Thomas CS: AIDS virus and CNS (letter). Ap 537

Thompson B see Bell CC

Thompson JW: More on standard deviation versus standard error (letter). Ap 540-541

Thompson JW, Blaine JD: Use of ECT in United States in 1975 and 1980. My

Thompson K see Wolkowitz OM

Thompson M see Stack LS
Thompson TL II: Psychiatrists' income (letter). Mr 391

Thyer BA, Stocks JT, Hudson WW: Reporting the proportions of variance explained (PVE) (letter). My 690

Tingle D, Fuller AK: bk rev, AF Schatzberg, JO Cole: Manual of Clinical Psychopharmacology; B Lerer, RD Weiner, RH Belmaker (eds): ECT: Basic Mechanisms (1984). Oc 1360-1361

Tobias CR see Turns DM Tolbert H see Pinta ER

Tollefson GD, Zander J, Garvey M, Saxena S, Godes M: reply to GE Hunt: DST status not predicted by serum sodium levels (letter). Se 1252

Tollefson GD see Garvey MJ Toner BB, Garfinkel PE, Garner DM: Cognitive style of patients with bulimic and diet-restricting anorexia nervosa. Ap 510-512

Train GJ: bk rev, RD Chessick: Psychology of the Self and the Treatment of Narcissism. Au 1090-1091

Troughton E see Price RA; Reich J

True BL, Perry PJ, Burns EA: Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. Se 1220-1221; correction, No 1521

Trull TJ, Widiger TA, Frances A: Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Je 767–771

Tryon WW, Pologe B: Accelerometric as-

sessment of tardive dyskinesia. De 1584-1587

Tsuang M see Biederman J

Tsuang MT see Rasmussen SA

Tucker L, Bauer SF, Wagner S, Harlam D, Sher I: Long-term hospital treatment of borderline patients: descriptive outcome study. No 1443-1448

Tune L see Rabins P

Tune LE see Golinger RC

Turns DM, Pary R, Tobias CR, James WA:
Depot neuroleptics for acutely psychotic patients (letter). Au 1099

Twerski B: reply to RP Climko: Depression and decongestants (letter). Oc 1377

Twerski B: Sympathomimetic-induced depression (letter). Fe 252 (letter: Climko, Oc 1376-1377)

Uebersax JS: ECT results and meta-analysis (letter). Fe 255-256 Uhde TW see Klein E; Mellman TA Uhlenhuth EH see Matuzas W

Unis AS see Jensen W

Ursano RJ, Hales RE: reply to J Alpert; MH Hollender; P Castelnuovo-Tedesco; AE Slaby; SE Harris; J Riskin: Comments on review of brief psychotherapies (letters). No 1517-1518

Ursano RJ see Rundell JR Uy J see Fyer MR

Vaillant GE: bk rev, J Sandler, A Freud: The Analysis of Defense: The Ego and the Mechanisms of Defense Revisited. Ja 110

Vaillant GE, McCullough L: Washington University Sentence Completion Test compared with other measures of adult ego development. Se 1189-1194

Vaillant GE see Phillips KA

Valgemae AH: Longing for twinship and lesbianism (letter). Se 1252

Van Bourgondien ME see Gualtieri CT van den Hout MA, van der Molen GM, Griez E, Lousberg H, Nansen A: Reduction of CO2-induced anxiety in patients with panic attacks after repeated CO₂ exposure. Je 788-791

van der Kolk B see Beck JC van der Molen GM see van den Hout MA Van Dyke C see Eisendrath SJ

Van Gelder P see Volkow ND van Gent EM, Nabarro G: Haloperidol as

alternative to lithium in pregnant women (letter). Se 1241

van Kammen DP see Goldstein G van Kammen W see Goldstein G

Van Sweden B: Poststroke mood disorders (letter). Oc 1372-1373

Van Sweden B, Rombaut P: Panic attacks and EEG abnormalities (letter). De 1624

VanValkenburg C: bk rev, L Laudan: Science and Values: The Aims of Science and Their Role in Scientific Debate. Mr 372-373

Vasile RG, Samson JA, Bemporad J, Bloomingdale KL, Creasey D, Fenton BT, Gudeman JE, Schildkraut JJ: Biopsychosocial approach to treating patients with affective disorders. Mr 341-344

Veith I: bk rev, AJ Marsella, G DeVos, FLK Hsu (eds): Culture and Self: Asian and Western Perspectives. Ja 116

Velek M, Stanford GK, Marco L: Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Je 827-828

Veliz J, James WS: Medicine court: Rogers in practice. Ja 62-67

Velligan DI see Miklowitz DJ

Vernooy D: Murphy's law of psycho-pharmacology (letter). Se 1244

Vieweg V, Glick JL, Herring S, Kerler R, Godleski LS, Barber J, Yank G, Spradlin W: Absence of carbamazepine-induced hyponatremia among patients also given lithium. Jy 943-947

Visotsky H: Council on International Affairs (off acts). Mr 402-403

Vita J see Fulop G

Vitagliano H see Beckett A; Jenike MA Vitiello B, Behar D, Wolfson S, Delaney MA: Panic disorder in prepubertal children (letter). Ap 525-526

Vogtsberger K see Mohl PC Volavka J see Abrams R

Volkmar FR: bk rev, WK Frankenburg, RN Emde, JW Sullivan (eds): Early Identification of Children at Risk: An International Perspective. My 683-684

Volkow ND, Wolf AP, Van Gelder P, Brodie JD, Overall JE, Cancro R, Gomez-Mont F: Phenomenological correlates of metabolic activity in 18 patients with chronic schizophrenia. Fe 151-158 (let-

ters: Meltzer; Kay, Oc 1366–1368)
Volkow ND, Wolf AP, Van Gelder P,
Brodie JD, Overall JE, Cancro R, Gomez-Mont F: reply to HY Meltzer; SR Kay: Positive and negative subtypes in schizophrenia (letters). Oc 1367-1368

von Bardeleben U see Holsboer F Voshart K see Rodin G

Wadle CV see Ruedrich SL Wagner RL see Friedman JH Wagner S see Tucker L

Wagner WW Jr see Gadpaille WJ Waldinger RJ: Intensive psychodynamic therapy with borderline patients: overview. Mr 267-274 (letter: Grolnick, Oc 1365-1366)

Waldron JA see McDermott JF Jr Walsh BT see Gladis MM

Walter-Ryan WG: bk rev, P Conroy: The Prince of Tides. De 1609-1610

Wamboldt FS, Kaslow NJ, Swift WJ, Ritholz M: reply to RC Burket: Depression in women with normal-weight bulimia (letter). Oc 1376 Wamboldt FS, Kaslow NJ, Swift WJ,

Ritholz M: Short-term course of depressive symptoms in patients with eating disorders. Mr 362-364 (letter: Burket, Oc 1375-1376)

Wanderling J see Zito JM

Wandry G see Khot V
Wandzel L, Falicki Z: Heroin addiction treated by atropine coma (letter). Se 1243 Ward M see Reimherr FW

Waternaux C see Biederman I

Wehr TA, Goodwin FK: Can antidepres-

sants cause mania and worsen course of affective illness? No 1403-1411

Wehr TA, Sack DA, Rosenthal NE: reply to JC Gillin: Sleep reduction: factor in genesis of mania? (letter). Se 1248-1249 Wehr TA, Sack DA, Rosenthal NE: Sea-

sonal affective disorder with summer depression and winter hypomania. De 1602–1603

Wehr TA, Sack DA, Rosenthal NE: Sleep reduction as final common pathway in genesis of mania. Fe 201-204; correction, Ap 542 (letter: Gillin, Se 1248)

Wehr TA, Skwerer RG, Jacobsen FM, Sack DA, Rosenthal NE: Eye versus skin phototherapy of seasonal affective disorder. Je 753-757

Wehr TA see Jacobsen FM; Parry BL Weiden P: Lithium and extrapyramidal side effects of neuroleptics (letter). Fe 264

Weiden P, Bruun R: Worsening of Tourette's disorder due to neurolepticinduced akathisia. Ap 504-505

Weiden PJ, Mann JJ, Haas G, Mattson M, Frances A: Clinical nonrecognition of neuroleptic-induced movement disorders: cautionary study. Se 1143-1153

Weilburg JB, Bear DM, Sachs G: Three patients with concomitant panic attacks and seizure disorder: possible clues to neurology of anxiety. Au 1053-1056

Weinberg WA see Emslie GJ Weinberger DR see Berman KF

Weiner H see Irwin M Weiner MF, Davis BM, Mohs RC, Davis KL: Influence of age and relative weight on cortisol suppression in normal subjects. My 646-649

Weiner RD see Hinkle PE Weingartner H see Wolkowitz CM Weingourt R see Jaffe K

Weinstein A see Hargreaves WA

Weinstein F: More on globus hystericus syndrome (letter). Ap 529

Weisenberg M see Solomon Z

Weiss BL: Failure of nalmefene and estrogen to improve memory in Alzheimer's disease (letter). Mr 386-387

Wellman HN see Hendrie HC

Wells KB, Hough RL, Golding JM, Burnam MA, Karno M: Which Mexican-Americans underutilize health se-vices? Jy 918-922

Wells KB see Manning WG Jr Wender PH see Reimherr FW West AN see Friedman MJ

Westermeyer J: Psychiatrist and solventinhalant abuse: recognition, assessment, and treatment. Jy 903-907

Whitman JR, Maier GJ, Eichelman B: β-Adrenergic blockers for aggressive behavior in schizophrenia (letter). Fp 538

Widiger TA see Trull TJ Wiebe DJ see Milby JB Wiggins OP see Schwartz MA Wightman L see Chapin K

Wilcox JA: Abuse of fluoxetine by patient with anorexia nervosa (letter). Au 1100 Wild J see Tennant FS Jr

Willenbring ML, Holtzman JL: Alcohol use in volunteers 1 year after study requiring alcohol intake (letter). Je 825

Williams JBW: Reliability of axis V of DSM-III (letter). Ap 536

Williams JBW see Rounsaville BJ Wilson WH see Mathew RJ

Winer JA: bk rev, JE Gedo: Conceptual Issues in Psychoanalysis: Essays in History and Method. Se 1229-1230

Winer JA: bk rev, JH Mencelson, NK Mello: Alcohol: Use and Abuse in America. Fe 239

Winer JA: bk rev, AD Richards, MS Willick (eds): Psychoanalysis: The Science of Mental Conflict (Essays in Honor of Charles Brenner). No 1499–1500

Winer JD see Winer JA

Winokur A see Amsterdam JD

Winokur G, Black DW: Psychiatric and medical diagnoses as risk factors for mortality in psychiatric patients: case-control study. Fe 208-211

Winslow RS, Stillner V, Coons DJ, Robison MW: reply to JP McEvoy: Dystonia, neuroleptic dose, and anticholinergic drugs (letter). Mr 393–394

Winston A see Rosenthal J Wise MG see Rundell JR

Wise SM: Use of animals in research (letter). Au 1111

Wistedt B see Palmstierna T Wolcott DL see Klein DE Wolf AP see Volkow ND Wolfson S see Vitiello B

Wolkowitz OM, Weingartner H, Thompson K, Pickar D, Paul SM, Hommer DW: Diazepam-induced amnesia: neuropharmacological model of "organic amnestic syndrome." Ja 25–29

syndrome."Ja 25–29 Wolkowitz OM see Amsterdam JD; Breier A; Lucas PB

Wong T see Ghadirian AM Wood DR see Reimherr FW Woods SW see Charney DS Woody G see Maany I

Woody GE, McLellan AT, Luborsky L, O'Brien CP: Twelve-month follow-up of psychotherapy for opiate dependence. My 590-596

Woody GE see Milby JB Wu JC see Buchsbaum MS

Wylie HW Jr, Wylie ML: Effect of pharmacotherapy on psychoanalytic process: case report of modified analysis. Ap 489–492

Wylie ML see Wylie HW Jr

Wynne LC: bk rev, IRH Falloon (ed): Family Management of Schizophrenia: A Study of Clinical, Social, Family, and Economic Benefits. Jy 959–960

Wyshak G see Mollica RF

Y

Yager J, Borus JF: Are we training too many psychiatrists? Au 1042–1048

Yager J, Landsverk J, Edelstein CK: 20month follow-up study of 628 women with eating disorders, 1: course and severity. Se 1172–1177

Yager J, Langsley DG: Evolving subspecialization of psychiatry: implications for profession. No 1461-1465

Yagi G, Itoh H: Follow-up study of 11 patients with potentially reversible tardive dyskinesia. No 1496–1498

Yamamoto J: bk rev, A Kleinman, B Good (eds): Culture and Depression: Studies in the Anthropology and Cross-Cultural Psychiatry of Affect and Disorder. Jy 961–962

Yang L, Zuo C, Su L, Eaton MT: Depression in Chinese medical inpatients. Fe 226–228

Yank G see Vieweg V Yarrow M see Kruesi MJP Yassouridis A see Schmauss C

Yates A: Current status and future directions of research on American Indian child. Se 1135–1142

Yates A: Should young children testify in cases of sexual abuse? Ap 476–480

Yates WR: bk rev, TE Bratter, GG Forrest (eds): Alcoholism and Substance Abuse: Strategies for Clinical Intervention. Au 1095-1096

Yates WR: bk rev, M Galanter (ed): Recent Developments in Alcoholism, vol 3. Ja 114

Yates WR: bk rev, A Roy (ed): Suicide. Je 820

Yates WR, Jacoby CG, Andreasen NC: Cerebellar atrophy in schizophrenia and affective disorder. Ap 465–467

Yates WR see Noyes R Jr Yeager C see Lewis DO Yeragani V see Rainey JM Jr Yeragani VK see Balon R; Pohl R

Yesavage JA: reply to JP Morgan: Carryover effects of marijuana (letter). Fe 260

Young JG: bk rev, SH Broman, E Bien, P Shaughnessy (eds): Low Achieving Children: The First Seven Years. Se 1237– 1238

Young MA see Clark DC Young RC see Alexopoulos GS Yurgelun-Todd D see Hudson JI \mathbf{Z}

Zadunaisky L see Lewis DO
Zahn TP see Breier A
Zahn-Waxler C see Kruesi MJP

Zametkin AJ, Karoum F, Rapoport JL: Treatment of hyperactive children with p-phenylalanine. Je 792–794

Zanarini MC see Morris H
Zander J see Tollefson GD
Zec RF see Berman KF
Zemlan FP see Thienhaus OJ
Zengotita HE see Adler LW

Zimmerman M: bk rev, WW Eaton, LG Kessler (eds): Epidemiologic Field Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program. Je 819

Zimmerman M, Coryell W, Pfohl B: Prognostic validity of dexamethasone suppression test: results of six-month prospective follow-up. Fe 212–214

Zimmerman M, Pfohl B, Coryell W, Stangl D: Prognostic validity of *DSM-III* axis IV in depressed inpatients. Ja 102–106

Zimmerman M see Coryell W
Zinberg NE: Elements of private therapeutic interview. De 1527–1533

Zis AP see Dorovini-Zis K

Zito JM, Craig TJ, Wanderling J, Siegel C: Pharmaco-epidemiology in 136 hospitalized schizophrenic patients. Je 778–782

Zubenko GS: reply to MH Stone: Homosexuality in patients with borderline personality disorder (letter). De 1622–1623

Zubenko GS, Cohen BM, Reynolds CF III, Boller F, Malinakova I, Keefe N: Platelet membrane fluidity in Alzheimer's disease and major depression. Jy 860–868

Zubenko GS, George AW, Soloff PH, Schulz P: Sexual practices among patients with borderline personality disorder. Je 748–752 (letter: Stone, De 1622)

Zubin J: bk rev, RJ Wyatt: After Middle Age: A Physician's Guide to Growing Old and Staying Healthy. Mr 377

Zumpe D see Michael RP Zuo C see Yang L

Subject Index

Α

Accelerometry

Accelerometric assessment of tardive dyskinesia. Tryon, De 1584–1587

Acetylcholine see also Anticholinergic

Growth hormone response to edrophonium in Alzheimer's disease. Thienhaus, Au 1049–1052

Acquired Immune Deficiency Syndrome

AIDS antibody tests on inpatient psychiatric units. Binder, Fe 176–181

AIDS delusions: a symptom of our times (letter). Lawlor, Se 1244

AIDS-related complex presenting as psychosis (letter). Halevie-Goldman, Jy 964 AIDS virus and CNS (letter). Thomas, reply of Rundell, Ap 537–538

Changes in AIDS risk behaviors among homosexual male physicians and university students. Klein, Je 742–747

Homophobia among physicians and nurses treating AIDS patients (letter). Kalman, No 1514-1515

Position statement on AIDS (off acts).

American Psychiatric Association, Au 1122

Position statement on HIV-related discrimination (off acts). American Psychiatric Association, Au 1122

Psychiatric aspects of AIDS. Faulstich, My 551-556

Symptomatic HIV infection of CNS in patient without clinical evidence of immune deficiency. Beckett, Oc 1342–1344

ACTH

ACTH response to corticotropin-releasing hormone (letter). Fava, Au 1102

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229–231

Controllable and uncontrollable stress in humans: alterations in mood and neuro-endocrine and psychophysiological function. Breier, No 1419–1425

Increased adrenal weight in victims of violent suicide. Dorovini-Zis, Se 1214–1215 Addiction

Fear of methadone maintenance (letter). Newman, reply of Milby, Mr 394–395

Heroin addiction treated by atropine coma (letter). Wandzel, Se 1243

Twelve-month follow-up of psychotherapy for opiate dependence. Woody, My 590– 596

Adenosine 3',5'-Monophosphate, Cyclic

Cyclic AMP signal transduction in posttraumatic stress disorder. Lerer, Oc 1324–1327

Adolescents

Clonazepam treatment of adolescents with neuroleptic-induced akathisia (letter). Kutcher, Je 823–824

Current status and future directions of research on American Indian child. Yates, Se 1135–1142

Depression, depressive symptoms, and depressed mood among community sample of adolescents. Kashani, Jy 931–934 New female perceptions of parental power. McDermott, Au 1086–1087

Past sexual victimization by females of male patients in adolescent medicine clinic population. Johnson, My 650-652

Prevalence of specific suicidal behaviors in high school sample. Harkavy Friedman, Se 1203–1206

Psychiatric disorders in community sample of adolescents. Kashani, My 584-589; correction, Au 1114

Retrospective study of adolescents' visits to general hospital psychiatric emergency service. Hillard, Ap 432–436

Sleep EEG findings in depressed children and adolescents. Emslie, My 668-670

Adrenal Hypertrophy

Increased adrenal weight in victims of violent suicide. Dorovini-Zis, Se 1214–1215 Adrenergic Blockers see Blockers, Adrener-

Adrenoreceptor Binding

Altered platelet α₂-adrenergic binding sites in posttraumatic stress disorder (letter). Perry, No 1511–1512

Adults

Clinical implications of adult developmental theory. Colarusso, Oc 1263-1270

Affective Disorders see also Depression; Mania

Altered platelet α_2 -adrenergic binding sites in posttraumatic stress disorder (letter). Perry, No 1511–1512

Athletic amenorrhea, major affective disorders, and eating disorders. Gadpaille, Jy 939-942

Biopsychosocial approach to treating patients with affective disorders. Vasile, Mr 341-344

Bipolar mood disorder and endometriosis: preliminary findings. Lewis, De 1588–

Can antidepressants cause mania and worsen course of affective illness? Wehr, No 1403-1411

Cerebellar atrophy in schizophrenia and affective disorder. Yates, Ap 465-467

Clinical predictors of suicide in patients with major affective disorders: controlled prospective study. Fawcett, Ja 35-40

Controlled study of lifetime prevalence of affective and other psychiatric disorders in bulimic outpatients. Hudson, Oc 1283–1287

Critical discussion of DSM-III dysthymic disorder. Kocsis, De 1534–1542

Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262

chiatry, Oc 1253–1262 DST and TRH stimulation test in mood disorder subtypes. Levy, Ap 472–475

Estrogen-progesterone combination: another mood stabilizer? (letter). Chouinard, Je 826

High rate of affective disorders in probands with attention deficit disorder and in their relatives: controlled family study. Biederman, Mr 330-333 (letter: Pugh, Oc 1266)

Maternal affective disorders, iliness, and stress: risk for children's psychopathology. Hammen, Je 736–741

Morning versus midday phototherapy of seasonal affective disorder. Jacobsen, Oc 1301–1305

Neuroleptic malignant syndronie (letter). Blum, Je 831

Phenomenology and family history of affective disorder in Cushing's disease. Hudson, Jy 951–953

Poststroke mood disorders (letter). Van Sweden B, reply of Robinson, Oc 1372– 1374

Predictors of interepisode symptoms and relapse in affective disorder patients treated with lithium carbonate. Goodnick, Mr 367–369

Pregnancy-related affective episodes among women with recurrent depression. Frank, Mr 288–293

Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493

Schizoaffective mania reconsidered. Levinson, Ap 415-425

Seasonal affective disorder with summer depression and winter hypomania. Wehr, De 1602–1603

Self-portrayal by depressed poet: contribution to clinical biography of William Cowper. Meyer, Fe 127–132 (letter: Charach, No 1521)

Treatment of rapid cycling bipolar patients (letter). Lieber, De 1619–1620

Use of ECT in United States in 1975 and 1980. Thompson, My 557-562

Aftercare see Deinstitutionalizat on

Age

Influence of age and relative weight on cortisol suppression in normal subjects. Weiner, My 646–649

Relationship between physical anomalies and age at onset of schizophrenia. Green, My 666–667

Aggression see Violence

Aggressive Conduct Disorder

Borderline diagnosis for children (letter). Behar, reply of Greenman, Au 1108– 1109

Aging see Geriatric Psychiatry Agitation

Treatment of agitated depression with alprazolam (letter). Gilbert, My 688

Agoraphobia

Behavioral aspects of panic disorder. Marks, Se 1160-1165

Cardiac rate and rhythm in panic patients. Shear, My 633-637

Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Reich, Mr 323–326 (letter: Maddock, De 1625)

Imipramine treatment of agoraphobia (letter). Robinson, My 687

Naturalistic study of imipramire in panic

disorder and agoraphobia. Aronson, Au 1014-1019

Trazodone in treatment of panic disorder and agoraphobia with panic attacks. Mavissakalian, Je 785–787

AIDS see Acquired Immune Deficiency Syndrome

AIDS-Related Complex

AIDS-related complex presenting as psychosis (letter). Halevie-Goldman, Jy 964 Akathisa

Clinical forms of severe tardive dyskinesia. Gardos, Jy 895–902

Clonazepam treatment of adolescents with neuroleptic-induced akathisia (letter). Kutcher, Je 823–824

Clonidine in neuroleptic-induced akathisia. Adler, Fe 235–236 (letter: Khot, No 1518–1519)

Comparison of propranolol, sotalol, and betaxolol in treatment of neuroleptic-induced akathisia. Dupuis, Je 802–805

Neuroleptic-induced akathisia treated with pindolol (letter). Reiter, Mr 383-384

Pindolol and propranolol in neurolepticinduced akathisia (letter). Adler, Se 1241-1242

Worsening of Tourette's disorder due to neuroleptic-induced akathisia. Weiden, Ap 504-505

Alaska

Alaska mental health lands. Schrader, Ja 107–109

Alcohol and Alcoholism

Alcohol use in volunteers 1 year after study requiring alcohol intake (letter). Willenbring, Je 825

Drug and alcohol abuse by bulimic women and their families. Bulik, De 1604–1606 Field trial of *DSM-III-R* psychoactive sub-

stance dependence disorders. Rounsaville, Mr 351–355

Outpatient group therapy for schizophrenic substance abusers. Hellerstein, Oc 1337–1339

Proposed changes in DSM-III substance dependence criteria (letters). Segal; Blackwell; Prado; reply of Rounsaville, Fe 257-259

Psychiatric complications of disulfiram treatment. Branchey, Oc 1310–1312

Serum prolactin levels in sons of alcoholics and control subjects. Schuckit, Jy 854– 859

TRH-induced TSH response in healthy volunteers: relationship to psychiatric history. Loosen, Ap 455–459

Aldosterone

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229–231 Allergy

Allergy to tartrazine in antidepressants. Pohl, Fe 237–238 (letter: Hollander, Se 1247)

Alprazolam

Carbamazepine, alprazolam withdrawal, and panic disorder (letter). Lawlor, reply of Klein, Fe 265-266

Discontinuation of alprazolam treatment in panic patients. Fyer, Mr 303-308

Emergence of depressive symptoms in patients receiving alprazolam for panic disorder. Lydiard, My 664-665

Schizophrenia, panic anxiety, and alprazolam (letter). Kahn, Ap 527-528

Sexual side effects of alprazolam (letter). Lydiard, Fe 254–255

Treatment of agitated depression with alprazolam (letter). Gilbert, My 688 Alzheimer's Disease see also Dementia

Cortisol and Alzheimer's disease (letter).

Davous, reply of Greenwald, Ap 533–535

CSF somatostatin in patients with Alzheimer's disease, older depressed patients, and age-matched control subjects. Sunderland, Oc 1313–1316

Dementia in American-Chinese nursing home population. Serby, Je 811–812

Failure of nalmefene and estrogen to improve memory in Alzheimer's disease (letter). Weiss, Mr 386–387

Growth hormone response to edrophonium in Alzheimer's disease. Thienhaus, Au 1049–1052

Induction of depression with oxotremorine in patients with Alzheimer's disease. Davis, Ap 468–471

Platelet membrane fluidity in Alzheimer's disease and major depression. Zubenko, Iv 860–868

Single photon emission tomographic brain images in dementia of the Alzheimer type (letter). Hendrie, Mr 387–388

Amantadine

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573–577

American Board of Medical Specialties

New American Board of Medical Specialties publications (letter). Langsley, Mr 383

American Board of Psychiatry and Neurology

1986–1987 annual report of American Board of Psychiatry and Neurology, Inc (off acts). American Board of Psychiatry and Neurology, Inc, Au 1119–1121

American Indians see Native Americans American Journal of Psychiatry

Editor's new year's greetings (editorial). Nemiah, Ja 75–81

American Psychiatric Association

Council on Aging (off acts). Cohen, Mr 397-398

Council on Children, Adolescents, and Their Families (off acts). Silver, Mr 398

Council on Economic Affairs (off acts). Scherl, Mr 399–400

Council on Internal Organization (off acts). Shellow, Mr 401

Council on International Affairs (off acts). Visotsky, Mr 402-403

Council on Medical Education and Career Development (off acts). Houpt, Mr 404-405

Council on National Affairs (off acts). Ruiz, Mr 406-408

Council on Psychiatric Services (off acts). Goldstein, Mr 408–411

Council on Psychiatry and Law (off acts). Roth, Mr 411-412

Council on Research (off acts). Pardes, Mr 413-414

Deceased Members of American Psychiatric

Association. Ja 109; Mr 369; My 675; Jy 953; Se 1153; No 1425

Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262

Guidelines on confidentiality (off acts). American Psychiatric Association, No 1522–1526

Highlights of 140th annual meeting (off acts). Benedek, Au 1115–1118

Position statement on AIDS (off acts).

American Psychiatric Association, Au 1122

Position statement on HIV-related discrimination (off acts). American Psychiatric Association, Au 1122

Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698–702 (letter: Milman, No 1515)

Presidential address: psychiatry in medicine: medicine in psychiatry. Pasnau, Au 975-980

Report of Committee of Tellers (off acts). Kirby, Oc 1402

Report of Committee on Constitution and By-Laws (off acts). Roberts, Oc 1398

Report of Committee on Membership (off acts). McIntyre, Oc 1399–1402

Report of Medical Director (off acts). Sabshin, Oc 1390–1393

Report of Secretary: summary of actions of Board of Trustees, May 1986–May 1987 (off acts). Benedek, Oc 1381–1388

Report of Speaker (off acts). Peele, Oc 1393-1396

Report of Speaker-Elect (off acts). Cohen, Oc 1397

Report of Treasurer (off acts). Levenson, Oc 1388–1390

Response to presidential address: opportunities and challenges that confront medicine and its specialties, with special reference to psychiatry. Pollock, Au 980–985

Robert O Pasnau, MD, one hundred fifteenth president, 1986–1987. Brill, Au 986–988

Amines

Biogenic amine and metabolite levels in depressed patients with high versus normal hypothalamic-pituitary-adrenocortical activity. Stokes, Jy 868–872

Amnesia

Diazepam-induced amnesia: neuropharmacological model of "organic amnestic syndrome." Wolkowitz, Ja 25–29

Amoxapine

Amoxapine and neuroleptic malignant syndrome (letter). Lesaca, No 1514
Animal Rights Movement

Use of animals in research (letter). Wise, reply of Pincus, Au 1111

Anorexia Nervosa see also Bulimia; Eating Disorders

Abuse of fluoxetine by patient with anorexia nervosa (letter). Wilcox, Au 1100

Cognitive style of patients with bulimic and diet-restricting anorexia nervosa. Toner, Ap 510–512

Treatment of anorexia nervosa (letter). Leichner, reply of Hsu, Fe 260 Treatment of anorexia nervosa patient with fluoxetine (letter). Ferguson, Se 1239

Antiandrogenic Agents

Antiandrogen treatment of aberrant sexual activity (letter). Ross, No. 1511

Anticholinergic Agents see also Acetylcholine

Association of elevated plasma anticholinergic activity with delirium in surgical patients. Golinger, Se 1218-1220

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573-577

Smoking of prescription anticholinergic drugs (letter). Brower, Mr 383

Antidepressants see also specific drugs

Bowel obsessions responsive to tricyclic antidepressants in four patients. Jenike, Oc 1347-1348

Clonazepam: antidepressant? (letter). Alvarez, Ap 536-537

Doses and blood levels of tricyclic antidepressants (letter). Berman, Fe 250-251

Potentiation of antidepressants by T3 and lithium (letter). Harrison, reply of Garbutt, Ap 530-531

Use of tricyclic antidepressants in patient with malignant hyperthermia (letter). Richter, Ap 526

Antihistamines

Depression and decongestants (letter). Climko, reply of Twerski, Oc 1376-1377 Anxiety

Cerebral ischemic symptoms in anxiety disorders (letter). Mathew, reply of Coyle, Fe 265

"Doom anxiety" and delirium in lidocaine toxicity. Saravay, Fe 159-163 (letters: Silber, Oc 1365; Mesulam, De 1623-1624)

DSM-III diagnoses associated with dyspepsia of unknown cause. Magni, Se 1222-

Family study of generalized anxiety disorder. Noyes, Au 1019-1024

Neurobiological mechanisms of panic anxiety: biochemical and behavioral correlates of yohimbine-induced panic attacks. Charney, Au 1030-1036

Psychiatric illness in mothers of anxious children. Last, De 1580-1583

Reduction of CO₂-induced anxiety in patients with panic attacks after repeated CO₂ exposure. van den Hout, Je 788-791

Separation anxiety and school phobia: comparison using DSM-III criteria. Last, My 653-657

Stressful life events and psychiatric hospitalization of mentally retarded patients. Stack, My 661-663

Three patients with concomitant panic attacks and seizure disorder: possible clues to neurology of anxiety. Weilburg, Au 1053-1056

Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Andrews, Oc 1331-1334

Ascorbic Acid

Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Giannini, Se 1207-1209

Asians

Dementia in American-Chinese nursing home population. Serby, Je 811-812

Follow-up study of 11 patients with potentially reversible tardive dyskinesia. Yagi, No 1496-1498

Indochinese versions of Hopkins Symptom Checklist-25: screening instrument for psychiatric care of refugees. Mollica, Ap 497–500

Psychosocial impact of war trauma and torture on Southeast Asian refugees. Mollica, De 1567-1572

Follow-up study of 11 patients with potentially reversible tardive dyskinesia. Yagi, No 1496-1498

Aspartame

Effects of sugar and aspartame on aggression and activity in children. Kruesi, No 1487-1490

Treatment of hyperactive children with Dphenylalanine. Zametkin, Je 792-794

Assaultive Behavior see Violence

Dream process in asthmatic subjects with nocturnal attacks. Monday, My 638-640 Athletes

Athletic amenorrhea, major affective disorders, and eating disorders. Gadpaille, Jy 939-942

Atropine

Heroin addiction treated by atropine coma (letter). Wandzel, Se 1243

Attention Deficit Disorder

Consequences of abrupt reduction of chronic symptoms (letter). Satel, Oc 1362 High rate of affective disorders in probands with attention deficit disorder and in their relatives: controlled family study. Biederman, Mr 330-333 (letter: Pugh, Oc 1266)

Open trial of L-tyrosine in treatment of attention deficit disorder, residual type. Reimherr, Au 1071-1073

Unexpected consequence of treatment for attention deficit disorder (letter). Merrill,

Avoidant Personality Disorder

Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767-771

Awareness Training see Group Awareness **Training**

В

Bacon, Francis

Francis Bacon and DSM-III (letter). Sheeley, reply of Faust, Mr 385-386

Behavior Disturbances

Abused to abuser: antecedents of socially deviant behaviors. Burgess, No 1431-1436

Effects of sugar and aspartame on aggression and activity in children. Kruesi, No 1487-1490

Behavior Therapy

Behavioral aspects of panic disorder. Marks, Se 1160-1165

Use of portable-computer program in behavioral treatment of obsessive-compulsive disorder (letter). Baer, Au 1101

Benzodiazepines

Clonidine in benzodiazepine withdrawal (letter). Keshavan, Ap 530

Misuse and abuse of benzodiazepines (letter). Ciccone, reply of Garvey, Se 1246-1247

Treatment of catatonia with low-dose lorazepam. Greenfeld, Se 1224-1225

Benztropine

Priapism treated with benztropine (letter). Greenberg, Mr 384–385

Bereavement

Alterations in immunocompetence during stress, bereavement, and depression: focus on neuroendocrine regulation. Calabrese, Se 1123-1134

Betaxolol

Comparison of propranolol, socalol, and betaxolol in treatment of neuroleptic-induced akathisia. Dupuis, Je 802-805

Bethanechol

Reversal by bethanechol of imipramine-induced ejaculatory dysfunction (letter). Segraves, Se 1243-1244

Bicameral Mind

What about bicameral mind? (letter). Moffic, reply of Asaad, My 696

Biopsychosocial Approach

Biopsychosocial approach to treating patients with affective disorders. Vasile, Mr 341-344

Systems and structure of meaning (letter). Rifkin, reply of Schwartz, Jy 971-972

Time and meaning of human experience (letter). Kubacki, reply of Schwartz, My 693-694 (letter: Bromberg, Oc 1364) Bipolar Illness see Affective Disorders

Blockers, Adrenergic

β-Adrenergic blockers for aggressive behavior in schizophrenia (letters). Whitman; Pugh; reply of Sorgi, Ap 538-539

Blood Flow, Cerebral

Relationship between anatomical and physiological brain pathology in schizophrenia: lateral cerebral ventricular size predicts cortical brain flow. Berman, Oc 1277-1282

Blood Pressure

Some physiologic antecedents of adult mental health. Phillips, Au 1009-1013

Body Image

Perceptual and cognitive abnormalities in bulimia. Powers, No 1456-1460

Book Reviews

Comment on review of The Foundations of Psychoanalysis (letter). Gorman, reply of Laor, Fe 256-257

More on The Ego Ideal (letter). Morrison, Ap 528

Torture and legal system (letter). Fuerst, reply of Schwerdt, Au 1113-1114

Books Reviewed

Abrahamsen D: Confessions of Son of Sam. Peele, Mr 380-381

Agras S: Panic: Facing Fears, Phobias, and Anxiety. Sheehan, Oc 1356-1357

Alonso A: The Quiet Profession: Supervisors of Psychotherapy. Nadelson, Ap 517 Alterman AI (ed): Substance Abuse and Psychopathology. Blume, Ja 113-114

Anderson CM, Reiss DJ, Hogarty GE (eds): Schizophrenia and the Family: A Practitioner's Guide to Psychoeducation and

- Management. Pridmore, Oc 1354-1355 Andreasen NC (ed): Can Schizophrenia Be Localized in the Brain? Stevens, Fe 243
- Bartholini G, Lloyd KG, Morselli PL (eds): GABA and Mood Disorders: Experimental and Clinical Research. Rogers, Mr 371
- Bennett LA, Ames GM (eds): The American Experience With Alcohol: Contrasting Cultural Perspectives. Favazza, Fe 240
- Bernheim KF, Lehman A: Working With Families of the Mentally Ill. Flynn, Jy 958-959
- Bliss EL: Multiple Personality, Allied Disorders and Hypnosis. Fuller, Mr 382
- Bloch S, Crouch E: Therapeutic Factors in Group Psychotherapy. Thackrey, Au 1089-1090
- Bloomingdale LM: Attention Deficit Disorder: Identification, Course, and Rationale. Cantwell, Fe 245
- Blos P: Son and Father: Before and Beyond the Oedipus Complex. Parker, Ja 110-111
- Blum D: Bad Karma: A True Story of Obsession and Murder. Dhopesh, De
- Bratter TE, Forrest GG (eds): Alcoholism and Substance Abuse: Strategies for Clinical Intervention. Yates, Au 1095-1096
- Brende JO, Parson ER: Vietnam Veterans: The Road to Recovery. Figley, Ap 522
- Brockman DD (ed): Late Adolescence: Psychoanalytic Studies. Hauser, Au 1096-1097
- Broman SH, Bien E, Shaughnessy P (eds): Low Achieving Children: The First Seven Years. Young, Se 1237-1238
- Buckley P (ed): Essential Papers on Object Relations. Nathanson, No 1501-1502
- Burrows GD, Norman TR, Davies B (eds): Antipsychotics: Drugs in Psychiatry, vol 3. Seeman, Ap 519-520
- Burrows GD, Norman TR, Dennerstein L (eds): Clinical and Pharmacological Studies in Psychiatric Disorders. Liberman, Au 1093-1094
- Bynum WF, Porter R, Shepherd M (eds): The Anatomy of Madness: Essays in the History of Psychiatry, vol I: People and Ideas. Nemiah, De 1610-1611
- Bynum WF, Porter R, Shepherd M (eds): The Anatomy of Madness: Essays in the History of Psychiatry, vol II: Institutions and Society. Nemiah, De 1610-1611
- Cancro R, Dean SR (eds): Research in the Schizophrenic Disorders: The Stanley R Dean Award Lectures, vol 1. Lindenmayer, Fe 243-244
- Cancro R, Dean SR (eds): Research in the Schizophrenic Disorders: The Stanley R Dean Award Lectures, vol 2. Lindenmayer, Fe 243-244
- Carmi A, Schneider S, Hefez A (eds): Psychiatry, Law and Ethics. Pence, My 680-681
- Casey DE, Chase TN, Christensen AV, Gerlach J (eds): Dyskinesia: Research and Treatment. Barnes, Jy 957-958
- Cazzullo CL, Invernizzi G (eds): Schizo-phrenia: An Integrative View. Pearlson, Jy 955-956
- Chatham PM: Treatment of the Borderline

- Personality. Friedman, Fe 241-242
- Chessick RD: Psychology of the Self and the Treatment of Narcissism. Train, Au 1090-1091
- Claridge G: Origins of Mental Illness: Temperament, Deviance and Disorder. de Kroon, Je 816-817
- Cocks G: Psychotherapy in the Third Reich: The Göring Institute. Thielman,
- Cohen S: The Substance Abuse Problems, vol 2: New Issues for the 1980s. Goodwin, Au 1094
- Cohen S, Callahan JF (eds): The Diagnosis and Treatment of Drug and Alcohol Abuse. Blume, Au 1095
- Conroy P: The Prince of Tides. Walter-Ryan, De 1609-1610
- Cooper JR, Bloom FE, Roth RH: The Biochemical Basis of Neuropharmacology, 5th ed. Seeman, Oc 1357
- Dean A (ed): Depression in Multidisciplinary Perspective. Roose, Ja 116-117
- Dorfman W, Cristofar L (eds): Psychosomatic Illness Review. Levy, Fe 245-246
- Eaton WW, Kessler LG (eds): Epidemiologic Field Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program. Zimmerman, Je 819
- Eccles J, Sperry R, Prigogine I, Josephson B (eds): Nobel Prize Conversations. Clare,
- Engelhardt HT Jr: The Foundations of Bioethics. Sider, Je 815-816
- Erdelyi MH: Psychoanalysis: Freud's Cognitive Psychology. Roazen, My 677
- Falloon IRH (ed): Family Management of Schizophrenia: A Study of Clinical, Social, Family, and Economic Benefits. Wynne, Jy 959–960
- Farrington DP, Gunn J (eds): Aggression and Dangerousness. Shore, Mr 378-379
- Feinsilver DB (ed): Towards a Comprehensive Model for Schizophrenic Disorders: Psychoanalytic Essays in Memory of Ping-Nie Pao, MD. Freedman, Oc 1353-
- Fine R: Narcissism, the Self, and Society. Beigler, My 677
- Fogel GI, Lane FM, Liebert RS (eds): The Psychology of Men: New Psychoanalytic Perspectives. Simon, Se 1226-1227
- Frances AJ, Hales RE (eds): Psychiatry Update: American Psychiatric Association Annual Review, vol 5. Freedman, Ap 515 Frankenburg WK, Emde RN, Sullivan JW
- (eds): Early Identification of Children at Risk: An International Perspective. Volkmar, My 683-684
- Frelick LF, Waring EM (eds): Marital Therapy in Psychiatric Practice: An Overview. Flynn, No 1504
- Gadow KD: Children on Medication, vol I: Hyperactivity, Learning Disabilities, and Mental Retardation. Jackson, Au 1097-
- Gadow KD: Children on Medication, vol II: Epilepsy, Emotional Disturbance, and Adolescent Disorders. Jackson, Au 1097-1098
- Galanter M (ed): Recent Developments in Alcoholism, vol 3. Yates, Ja 114
- Galanter M (ed): Recent Developments in

- Alcoholism, vol 4. Liskow, Se 1235
- Garner DM, Garfinkel PE (eds): Handbook of Psychotherapy for Anorexia Nervosa and Bulimia. Powers, Je 821
- Gay P: Freud for Historians. Michels, Ja 111-112
- Gedo JE: Conceptual Issues in Psychoanalysis: Essays in History and Method. Winer, Se 1229-1230
- Gildenberg PL, DeVaul RA: The Chronic Pain Patient: Evaluation and Management. Levy, Ja 118
- Goldberg A (ed): Progress in Self Psychology, vol 1. Lansky, No 1500-1501
- Goldman HH (ed): Review of General Psy-
- chiatry. Pastor, My 684-685 Goodwin DK: The Fitzgeralds and the Kennedys: An American Saga. Goodwin, De 1613
- Goodwin DW: Anxiety. Noyes, Oc 1356 Greben SE, Rakoff VM, Vioneskos G (eds): A Method of Psychiatry, 2nd ed. Frances, Mv 685
- Green AR (ed): Neuropharmacology of Serotonin. Meltzer, Se 1233
- Grinspoon L (ed): The Long Darkness: Psychological and Moral Perspectives on Nuclear Winter. Lipton, Je 816
- Guggenheim FG (ed): Psychological Aspects of Surgery. Dimsdale, Se 1231-1232
- Hand DJ: Artificial Intelligence and Psychiatry. Morice, Oc 1352-1353
- Harris JE: Clinical Neuroscience: From Neuroanatomy to Psychodynamics. Robinson, Mr 371–372
- Havens L: Making Contact: Uses of Language in Psychotherapy. Cooper, Au
- Hersen M, Bellack AS (eds): Handbook of Clinical Behavior Therapy With Adults. Barlow, Ap 518-519
- Hobby GL: Penicillin: Meeting the Chal-
- lenge. King, Je 817–818 Horowitz MJ: Stress Response Syndromes,
- 2nd ed. Figley, Se 130–131 Horwell DC (ed): Drugs in Central Nervous System Disorders. Hamilton, Au 1092-1093
- Howells JG, Guirguis WR: The Family and Schizophrenia. Miklowitz, Jy 960
- Jones LR, Parlour RR (eds): Psychiatric Services for Underserved Rural Populations. Barter, Je 818-819
- Julien RM: A Primer of Drug Action, 4th ed. Salzman, Ap 519
- Kandel ER, Schwartz JH (eds): Principles of Neural Science, 2nd ed. Rogers, Mr 370
- Kaplan HS: Sexual Aversion, Sexual Phobias, and Panic Disorders. Reich, Oc 1356
- Kemali D, Racagni G (eds): Chronic Treatments in Neuropsychiatry: Advances in Biochemical Psychopharmacology, vol 40. Rifkin, Oc 1359-1360
- Kerr A, Snaith P: Contemporary Issues in Schizophrenia. Pridmore, Jy 957
- Kleinman A: Social Origins of Distress and Disease: Depression, Neurasthenia, and Pain in Modern China. Dunner, De 1617-1618
- Kleinman A, Good B (eds): Culture and Depression: Studies in the Anthropology

- and Cross-Cultural Psychiatry of Affect and Disorder. Yamamoto, Jy 961-962
- Klerman GL (ed): Suicide and Depression Among Adults and Young Adults. Pfef-
- Korpell HS: How You Can Help: A Guide for Families of Psychiatric Hospital Patients. Schwab, Mr 376
- Kressel K: The Process of Divorce: How Professionals and Couples Negotiate Settlements. Stier, Mr 379-380
- Krüll M: Freud and His Father; translated by AJ Pomerans. Cooper, De 1614-1615 L'Abate L: Systematic Family Therapy. Grunebaum, No 1502
- Lake CR, Ziegler MG (eds): The Catecholamines in Psychiatric and Neurologic Disorders. Baldessarini, Se 1232-1233
- Lamberg L: Straight Talk, No-Nonsense Guide to Better Sleep; edited by American Medical Association. Gillin, Mr 376-377
- Lancaster JB, Altmann J, Rossi AS, Sherrod LR (eds): Parenting Across the Life Span: Biosocial Dimensions. Myers, No 1503
- Lansky MR (ed): Family Approaches to Major Psychiatric Disorders. Flynn, Jy 958-959
- Laudan L: Science and Values: The Aims of Science and Their Role in Scientific Debate. VanValkenburg, Mr 372-373
- Lazarus IH: Endocrine and Metabolic Effects of Lithium. Dunner, Ap 520
- Lazarus RS, Folkman S: Stress, Appraisal, and Coping. Gauron, Ap 521-522
- Leporé F, Ptito M, Jasper HH (eds): Two Hemispheres-One Brain: Functions of the Corpus Callosum. Swayze, Oc 1351-
- Lerer B, Weiner RD, Belmaker RH (eds): ECT: Basic Mechanisms (1984). Tingle, Oc 1360-1361
- Lifton RJ: The Nazi Doctors: Medical Killing and the Psychology of Genocide. Reich, De 1612-1613
- Lipowski ZJ: Psychosomatic Medicine and Liaison Psychiatry: Selected Papers. Pasnau, Fe 246-247 Lowell R: The Collected Prose. Andreasen,
- De 1607-1608
- McDougall J: Theaters of the Mind: Illusion and Truth on the Psychoanalytic Stage. Chessick, Ap 515-516
- Maloney MP: A Clinician's Guide to Forensic Psychological Assessment. Malmquist, My 681-682
- Marsella AJ, DeVos G, Hsu FLK (eds): Culture and Self: Asian and Western Perspectives. Veith, Ja 116
- Mavissakalian M, Turner SM, Michelson L (eds): Obsessive-Compulsive Disorder: Psychological and Pharmacological Treatment. Noyes, Fe 242
- Mechanic D: From Advocacy to Allocation: The Evolving American Health Care System. Sharfstein, Je 818
- Meichenbaum D: Stress Inoculation Training. Gauron, Ap 521-522
- Mendelson JH, Mello NK: Alcohol: Use and Abuse in America. Winer, Fe 239 Menkes JH: Textbook of Child Neurology,
- 3rd ed. Beeghly, Mr 374-375 Menolascino FJ, Stark JA (eds): Handbook

- of Mental Illness in the Mentally Retarded. Tarjan, Fe 244-245
- Mesulam MM (ed): Principles of Behavioral Neurology. Minshew, Oc 1351
- Millon T, Everly GS Jr: Personality and Its Disorders: A Biosocial Learning Approach. Reich, Fe 242-243
- Mitchell JE (ed): Anorexia Nervosa and Bulimia: Diagnosis and Treatment. Herman, Je 820-821
- Nauta WJH, Feirtag M: Fundamental Neuroanatomy. Jaskiw, Se 1233-1234
- North CS: Welcome, Silence: My Triumph Over Schizophrenia. Shore, De 1614
- Ostwald P: Schumann: The Inner Voices of a Musical Genius. Cadoret, De 1613-1614
- Park BE: The Impact of Illness on World Leaders. Black, De 1616-1617
- Perry S, Frances A, Clarkin J: A DSM-III Casebook of Differential Therapeutics: A Clinical Guide to Treatment Selection. Reiser, Au 1091
- Pfeffer C: The Suicidal Child. Leckman, No 1505-1506
- Pincus HA, Pardes H (eds): The Integration of Neuroscience and Psychiatry. Meller, Mr 370-371
- Reid WH, Dorr D, Walker JI, Bonner JW III (eds): Unmasking the Psychopath: Antisocial Personality and Related Syndromes. Black, Jy 954-955
- Reisner R: Law and the Mental Health System: Civil and Criminal Aspects. Slovenko, Mr 379
- Richards AD, Willick MS (eds): Psychoanalysis: The Science of Mental Conflict (Essays in Honor of Charles Brenner). Winer, No 1499-1500
- Rose FC (ed): Modern Approaches to the Dementias, Part I: Etiology and Pathophysiology. Folstein, Jy 963
- Rose FC (ed): Modern Approaches to the Dementias, Part II: Clinical and Therapeutic Aspects. Folstein, Jy 963
- Rosen H: Piagetian Dimensions of Clinical Relevance. Friedman, Au 1091-1092
- Rosenbaum B, Sonne H: The Language of Psychosis. Hoffman, Oc 1355-1356
- Rossi EL, Ryan MO (eds): Life Reframing in Hypnosis: The Seminars, Workshops, and Lectures of Milton H Erickson, vol II. Frankel, Mr 381-382
- Roth M, Bluglass R (eds): Psychiatry, Human Rights and the Law. Opton, My 680 Roy A (ed): Suicide. Yates, Je 820
- Rutter M, Izard CE, Read PB (eds): Depression in Young People: Developmental and Clinical Perspectives. Klykylo, No 1505
- Sandler J, Freud A: The Analysis of Defense: The Ego and the Mechanisms of Defense Revisited. Vaillant, Ja 110
- Sartre J-P: The Freud Scenario; edited by J-B Pontalis; translated by Quintin Hoare. Stone, De 1608-1609
- Scarf M: Intimate Partners: Patterns in Love and Marriage. Myers, No 1504
- Schatzberg AF, Cole JO: Manual of Clinical Psychopharmacology. Tingle, Oc 1360-
- Schetky DH, Benedek EP (eds): Emerging Issues in Child Psychiatry and the Law.

- Slovenko, Au 1098
- Schopler E, Mesibov GB (eds): The Effects of Autism on the Family. Rumsey, My 682-683
- Schwaber EA (ed): The Transference in Psychotherapy: Finch, No 1499 Clinical Management.
- Schwartz S, Johnson JH: Psychopathology of Childhood: A Clinical-Experimental Approach, 2nd ed. Carlson, Se 1237
- Segal M (ed): Psychopharmacology of Sexual Disorders. Levine, Au 1093
- Seiden LS, Balster RL (eds): Behavioral Pharmacology: The Current Status. Gardner, Ap 520
- Shaffer D, Ehrhardt AA, Greenhill LL (eds): The Clinical Guide to Child Psychiatry. Klykylo, Se 1236-1237
- Shepherd M (ed): The Spectrum of Psychiatric Research. Reynolds, My 684
- Shneidman E: Definition of Suicide. Pfeffer, Ja 117-118
- Shortt SE: Victorian Lunacy: Richard M Bucke and the Practice of Late Nineteenth-Century Psychiatry. Peele, De 1612
- Smart RG, Cappell HD, Glaser FB, Israel Y, Kalant H, Popham RE, Schmidt W, Sellers EM (eds): Research Advances in Alcohol and Drug Problems, vol 8. Meyer, Se 1235-1236
- Solnit AJ, Eissler RS, Neubauer PB (eds): The Psychoanalytic Study of the Child, vol 40. Hauser, No 1506-1508
- Sonnenberg SM, Blank AS Jr, Talbott JA (eds): The Trauma of War: Stress and Recovery in Viet Nam Veterans. Ramir-
- ez, Ap 522-523 Starr P: The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry. Siegal, Mr 373-374
- Stearns CZ, Stearns PN: Anger: The Struggle for Emotional Control in America's History. Meehan, De 1612
- Stein HF: The Psychodynamics of Medical Practice: Unconscious Factors in Patient Care. Phillips, Ap 516-517
- Stepansky PE (ed): Freud: Appraisals and Reappraisals. Markowitz, My 676-677
- Stepansky PE, Goldberg A (eds): Kohut's Legacy: Contributions to Self Psychology. Stern, Se 1227-1229
- Stern DN: The Interpersonal World of the Infant: A View From Psychoanalysis and Developmental Psychology. Solnit, No. 1508-1509
- Stierlin H, Simon FB, Schmidt G (eds): Familiar Realities: The Heidelberg Conference. Grunebaum, No 1503-1504
- Stimmel B (ed): Alcohol and Substance Abuse in Adolescence. Mayfie d, Ja 114-
- Stoller R: Presentations of Gender. Lothstein, Ja 112-113
- Stone MH (ed): Essential Papers on Borderline Disorders: One Hundred Years at the Border. Frances, Jy 954
- Stover E, Nightingale EO (eds): I'he Breaking of Bodies and Minds: Torture, Psychiatric Abuse, and the Health Professions. Schwerdt, Ja 115-116 (letter: Fuerst, Au 1114)

Tonkonogy JM: Vascular Aphasia. Benson, Mr 375-376

Trosman H: Freud and the Imaginative World. Oremland, My 678

Wallerstein RS (ed): Forty-Two Lives in Treatment: A Study of Psychoanalysis and Psychotherapy. Chessick, My 678-

Warner R: Recovery From Schizophrenia: Psychiatry and Political Economy. Mosher, Jy 956-957

Watson JW, Switzer RE, Hirschberg JC: Sometimes I Get Angry (1971). Benedek, De 1615-1616

Watson JW, Switzer RE, Hirschberg JC: Sometimes I'm Afraid (1971). Benedek, De 1615-1616

Watson JW, Switzer RE, Hirschberg JC: Sometimes I'm Jealous. Benedek, De 1615-1616

Webster CD, Ben-Aron MH, Hucker SJ (eds): Dangerousness: Probability and Prediction, Psychiatry and Public Policy. Shore, Mr 378-379

Weiner MF: Practical Psychotherapy. Karasu, Au 1089

Wiener JM (ed): Diagnosis and Psychopharmacology of Childhood and Adolescent Disorders. Cantwell, Oc 1357-1359 Willner P: Depression: A Psychobiological

Synthesis. Nelson, Jy 962

Wing L: Autistic Children: A Guide for Parents and Professionals. Rumsey, My

Wyatt RJ: After Middle Age: A Physician's Guide to Growing Old and Staying Healthy. Zubin, Mr 377

Yalom ID: The Theory and Practice of Group Psychotherapy, 3rd ed. Gauron, Ap 517-518

Yamamura HI, Enna SJ, Kuhar MJ (eds): Neurotransmitter Receptor Binding, 2nd ed. Rogers, Se 1234

Zeligs DE: Moses: A Psychodynamic Study. Schwerdt, Se 1230

Zilbach JJ: Young Children in Family Therapy. Lansky, No 1506 Zimberg S, Wallace J, Blume SB (eds):

Practical Approaches to Alcoholism Psychotherapy, 2nd ed. Tarter, Fe 240-241 Borderline Personality Disorder

Borderline diagnosis for children (letter). Behar, reply of Greenman, Au 1108-

Borderline personality and DSM-III (letter). Nakdimen, Fe 254

Difference in reaction time between subjects with schizotypal and borderline personality disorders. Chapin, Jy 948-950

Dysphoria associated with methylphenidate infusion in borderline personality disorder. Lucas, De 1577-1579

Initial contract in treatment of borderline patients. Selzer, Jy 927-930

Intensive psychodynamic therapy with bor-derline patients: overview. Waldinger, Mr 267-274 (letter: Grolnick, Oc 1365-1366)

Long-term hospital treatment of borderline patients: descriptive outcome study. Tucker, No 1443-1448

Obsessive-compulsive disorder and border-

line personality disorder (letter). Hermesh, reply of Rasmussen, Ja 120-122

Sexual practices among patients with borderline personality disorder. Zubenko, Je 748–752 (letter: Stone, De 1622–1623) So-called borderline children (letter).

Gualtieri, reply of Greenman, Je 832-

Transitional object use and borderline personality (letters). Adler; Goodwin; reply of Morris, Se 1250-1251

Bowels

Bowel obsessions responsive to tricyclic antidepressants in four patients. Jenike, Oc

Brain Disorders see also Cognition; Lateralization, Cerebral; Ventricular Size

AIDS virus and CNS (letter). Thomas, reply of Rundell, Ap 537-538

Cerebellar atrophy in schizophrenia and affective disorder. Yates, Ap 465-467

Cerebral ischemic symptoms in anxiety disorders (letter). Mathew, reply of Coyle, Fe 265

Hypofrontality in schizophrenia as assessed by PET (letter). Buchsbaum, reply of Kling, Ja 122-123

Increased ventricle-to-brain ratio in lateonset schizophrenia. Rabins, Se 1216-1218

Neurological aspects of schizophrenia-like psychosis (letter). Aird, Oc 1362-1363

Patients with panic attacks and abnormal EEG results. Edlund, Ap 508-509 (letter: Van Sweden, De 1624-1625)

Phenomenological correlates of metabolic activity in 18 patients with chronic schizophrenia. Volkow, Fe 151-158 (letters: Meltzer; Kay, Oc 1366-1368)

Platelet membrane fluidity in Alzheimer's disease and major depression. Zubenko, Jy 860-868

Poststroke mood disorders (letter). Van Sweden B, reply of Robinson, Oc 1372-1374

Relationship between anatomical and physiological brain pathology in schizophrenia: lateral cerebral ventricular size predicts cortical brain flow. Berman, Oc 1277-1282

Relationship between physical anomalies and age at onset of schizophrenia. Green, My 666-667

Right-hemisphere deficit syndrome in children (letters). Demb; Jerome, Je 830-831

Symptomatic HIV infection of CNS in patient without clinical evidence of immune deficiency. Beckett, Oc 1342-1344

Study of crying in medically and surgically hospitalized patients. Green, Ap 442-

Brief Psychotherapy

Comments on review of brief psychotherapies (letters). Alpert; Hollender; Castelnuovo-Tedesco; Slaby; Harris; Riskin; reply of Ursano, No 1515-1518

Bromocriptine

Effect of bromocriptine on affect and libido in hyperprolactinemia. Koppelman, Au 1037-1041

Bulimia see also Anorexia Nervosa; Eating Disorders

Cognitive style of patients with bulimic and

diet-restricting anorexia nervosa. Toner, Ap 510-512

Controlled study of lifetime prevalence of affective and other psychiatric disorders in bulimic outpatients. Hudson, Oc 1283-1287

Drug and alcohol abuse by bulimic women and their families. Bulik, De 1604-1606 Heroin-induced vomiting in bulimia (letter). Mitchell, Fe 249–250

Perceptual and cognitive abnormalities in bulimia. Powers, No 1456-1460

Premenstrual exacerbation of binge eating in bulimia. Gladis, De 1592-1595

Buprenorphine

Antipsychotic effect of buprenorphine in schizophrenia. Schmauss, Oc 1340-1342

C

Caffeine

Facilitation of ECT by caffeine pretreatment. Shapira, Se 1199-1202

New technology in convulsive therapy: challenge in training (editorial). Fink, Se 1195-1198

Use of caffeine to lengthen seizures in ECT. Hinkle, Se 1143-1148

Calcium Channel Antagonists
Mediation of "calcium antagonist" effects by dopamine receptor blockade (letter). Nurnberger, Jy 966–967 cAMP see Adenosine 3',5'-Monophos-

phate, Cyclic

Carbamazepine

Absence of carbamazepine-induced hyponatremia among patients also given lithium. Vieweg, Jy 943-947

Carbamazepine, alprazolam withdrawal, and panic disorder (letter). Lawlor, reply of Klein, Fe 265-266

Carbon Dioxide see CO₂

Cardiac Dysfunction

Cardiac rate and rhythm in panic patients. Shear, My 633-637

Electrocardiographic effects of nortriptyline, phenelzine, and placebo under optimal treatment conditions. Georgotas, Je

Idiopathic cardiomyopathy and panic disorder: clinical association in cardiac transplant candidates. Kahn, Oc 1327-1330

Mitral valve prolapse and thyroid abnormalities in patients with panic attacks. Matuzas, Ap 493-496

Catatonia

Changing presentation of catatonia (letter). Kay, reply of Ries, Je 834-835

Lorazepam for psychogenic catatonia. Salam, Au 1082-1083

Treatment of catatonia with low-dose lorazepam. Greenfeld, Se 1224-1225

Cerebellar Pathology see Brain Disorders Cerebrovascular Accident see Stroke Child Abuse

Abused to abuser: antecedents of socially deviant behaviors. Burgess, No 1431-

Assault experiences of 100 psychiatric inpatients: evidence of need for routine inquiry. Jacobson, Jy 908-913

Childhood sexual and physical abuse as factors in adult psychiatric illness. Bryer, No 1426-1430

Long-term effects of incest (letter). Evenson, Jy 967-968

Past sexual victimization by females of male patients in adolescent medicine clinic population. Johnson, My 650-652

Reports of childhood incest and current behavior of chronically hospitalized psychotic women. Beck, No 1474-1476

Should young children testify in cases of sexual abuse? Yates, Ap 476-480

Borderline diagnosis for children (letter). Behar, reply of Greenman, Au 1108-

Childhood cruelty to animals and later aggression against people: review. Felthous, Je 710–717

Childhood experiences of homeless men. Susser, De 1599-1601

Current status and future directions of research on American Indian child. Yates, Se 1135-1142

Effects of sugar and aspartame on aggression and activity in children. Kruesi, No 1487-1490

Maternal affective disorders, illness, and stress: risk for children's psychopathology. Hammen, Je 736-741

Onset of Gilles de la Tourette's syndrome before 1 year of age. Burd, Au 1066-1067

Panic disorder in prepubertal children (letter). Vitiello, Ap 525-526

Past sexual victimization by females of male patients in adolescent medicine clinic population. Johnson, My 650-652

Psychiatric illness in mothers of anxious children. Last, De 1580-1583

Right-hemisphere deficit syndrome in children (letters). Demb; Jerome, Je 830-831

Separation anxiety and school phobia: comparison using DSM-III criteria. Last, My 653-657

Seriously depressed preschoolers. Kashani, Mr 348-350

Should young children testify in cases of sexual abuse? Yates, Ap 476-480

Sleep EEG findings in depressed children and adolescents. Emslie, My 668-670

So-called borderline children (letter). Gualtieri, reply of Greenman, Je 832-833

Temperament and intellectual development: longitudinal study from infancy to four years. Maziade, Fe 144-150

Treatment of hyperactive children with Dphenylalanine. Zametkin, Je 792-794 Chinese

Dementia in American-Chinese nursing

home population. Serby, Je 811-812 Depression in Chinese medical inpatients. Yang, Fe 226-228

Choline see Acetylcholine Chorioretinopathy

Loss of vision due to central serous chorioretinopathy following psychological stress. Gelber, Ja 46-50

Chronically Ill Patients

Characteristics of very poor outcome schizophrenia. Keefe, Jy 889-895

Consequences of abrupt reduction of chronic symptoms (letter). Satel, Oc 1362

Classification see Diagnosis and Classifica-

Clomipramine

Clonidine and clomipramine in obsessivecompulsive disorder (letter). Lipsedge, Jy 965-966

Clonazepam

Clonazepam: antidepressant? (letter). Alvarez, Ap 536-537

Clonazepam in treatment of chronic schizophrenia (letter). Raines, No 1510

Clonazepam treatment of adolescents with neuroleptic-induced akathisia (letter). Kutcher, Je 823-824

Convulsions in patients abruptly withdrawn from clonazepam while receiving neuroleptic medication (letter). Ghadirian, My 686

Clonidine

Clonidine and clomipramine in obsessivecompulsive disorder (letter). Lipsedge, Jy

Clonidine in benzodiazepine withdrawal (letter). Keshavan, Ap 530

Clonidine in neuroleptic-induced akathisia. Adler, Fe 235-236 (letter: Khot, No 1518-1519)

Growth hormone response to clonidine in depression (letter). Mitchell, My 690-

Propranolol as adjunct to clonidine in opiate detoxification (letter). Roehrich, Au 1099-1100

CNS

AIDS virus and CNS (letter). Thomas, reply of Rundell, Ap 537-538

Psychiatric aspects of AIDS. Faulstich, My 551-556

CO_2

CO₂ challenge of patients with panic disorder. Fyer, Au 1080-1082

Reduction of CO2-induced anxiety in patients with panic attacks after repeated CO2 exposure. van den Hout, Je 788-791

Cocaine

More on cocaine and panic disorder (letter). Pohl, Oc 1363

Phencyclidine and "crack"-precipitated panic disorder (letter). Price, My 686-687

Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698-702 (letter: Milman, No 1515)

Cognition see also Brain Disorders

Cognitive style of patients with bulimic and diet-restricting anorexia nervosa. Toner, Ap 510-512

Difference in reaction time between subjects with schizotypal and borderline personality disorders. Chapin, Jy 948-950

Levels of emotional awareness: cognitivedevelopmental theory and its application to psychopathology. Lane, Fe 133-143; correction, Ap 542

Perceptual and cognitive abnormalities in bulimia. Powers, No 1456-1460

Positive and negative subtypes in schizo-

phrenia (letter). Kay, reply of Volkow, Oc 1367-1368

Temperament and intellectual development: longitudinal study from infancy to four years. Maziade, Fe 144-150

Coma

Heroin addiction treated by atropine coma (letter). Wandzel, Se 1243

Combat see also War

Auditory hallucinations in combat-related chronic posttraumatic stress disorder. Mueser, Mr 299-302

More on posttraumatic stress disorder (letters). Kadushin (letter: Laufer, Je 822); Pepper, Fe 253-254

Neuropsychological hypothesis explaining posttraumatic stress disorders. Kolb, Au 989–995

Posttraumatic stress disorder among frontline soldiers with combat stress reaction: 1982 Israeli experience. Solomon, Ap 448-454

Posttraumatic stress disorder etiologic specificity of wartime stresso's. Breslau, My 578-583

Reactivation of combat-related posttraumatic stress disorder. Solomon, Ja 51-55

Combined Drug Therapy see also Drug Interactions

Absence of carbamazepine-induced hyponatremia among patients also given lithium. Vieweg, Jy 943-947

Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Giannini, Se 1207-1209

Convulsions in patients abruptly withdrawn from clonazepam while receiving neuroleptic medication (letter). Ghadirian, My 686

Estrogen-progesterone combination: another mood stabilizer? (letter). Chouinard, Je 826

Polypharmacy (letter). Ostow, Je 825-826 Potentiation of antidepressants by T3 and lithium (letter). Harrison, reply of Garbutt, Ap 530-531

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827-828

Propranolol as adjunct to clonidine in opiate detoxification (letter). Roehrich, Au 1099-1100

Combined Psychotherapy and Pharmacotherapy

Comparative trial of pharmacologic strategies in schizophrenia. Carpenter, No 1466-1470

Relapse in recurrent unipolar depression. Kupfer, Ja 86-88

Commitment, Civil

Coerced outpatient treatment (letter). Mossman, reply of Geller, Jy 968-969

Competency determinations in civil commitment. Bloom, Fe 193-196

Legal basis of forensic psychiatry: statutorily mandated psychiatric diagnoses. Bloom, Jy 847–853

Mandatory outpatient treatment (letter). Bursten, reply of Appelbaum, Mr 389-

Outpatient civil commitment (letter). Leong; replies of Bursten, Geller, My 694–696

Patient incompetence in legal settings (letter). Goldstein, reply of Gutheil, Fe 249

Predictive validity of judgments of dangerousness in emergency civil commitment. McNiel, Fe 197–200

Voluntary and involuntary patients (letter). Geller, reply of Okin, Au 1112–1113

Community Care see Deinstitutionalization Community Mental Health Centers see also Mental Health Services, Delivery of

Conceptual and methodological issues in comparison of inpatient psychiatric facilities. Goodban, No 1437–1443

Competency

Competency determinations in civil commitment. Bloom, Fe 193-196

Legal basis of forensic psychiatry: statutorily mandated psychiatric diagnoses. Bloom, Jy 847–853

Medicine court: Rogers in practice. Veliz, Ja 62-67

Patient incompetence in legal settings (letter). Goldstein, reply of Gutheil, Fe 249

Computer

Use of portable-computer program in behavioral treatment of obsessive-compulsive disorder (letter). Baer, Au 1101

Confidentiality

Guidelines on confidentiality (off acts).

American Psychiatric Association, No
1522

Conflict

Sources of conflict in medical marriage. Gabbard, My 567-572

Contract, Treatment

Initial contract in treatment of borderline patients. Selzer, Jy 927–930

Conversion Reaction

Hallucinations as conversion symptoms (letter). McKegney, reply of Asaad, My 696–697

Convulsions see Seizures Convulsive Therapy see ECT

Coping

Scale for measuring patients' ability to cope (letter). French, Mr 389

Corrections

Altshuler LL, Cummings JL, Mills MJ: Mutism: review, differential diagnosis, and report of 22 cases (143:1409). Ap 542

Grolnick SA: bk rev, N Kiell (ed): Blood Brothers: Siblings as Writers (143:1615).

Hale AA, Stern SI., Wongsam PE: Fibromyalgia in woman with bipolar disorder, manic phase (letter) (143:1064). Mr 396

Kashani JH, Beck NC, Hoeper EW, Fallahi C, Corcoran CM, McAllister JA, Rosenberg TK, Reid JC: Psychiatric disorders in community sample of adolescents (144:585). Au 1114

Lane RD, Schwartz GE: Levels of emotional awareness: cognitive-developmental theory and its application to psychopathology (144:135, 136, 138, 141). Ap 542

Lazarus LW, Newton N, Cohler B, Lesser J, Schweon C: Frequency and presentation of depressive symptoms in patients with primary degenerative dementia (144:45). Ap 542

Mann SC, Caroff SN, Bleier HR, Welz WKR, Kling MA, Hayashida M: Lethal catatonia (143: cover; A4). Ja 126

Tollefson GD, Zander J, Luxenberg M, Saxena S, Godes M, Garvey MJ: Prediction of postdexamethasone cortisol levels by serum sodium levels in patients with major depression (143:81–84). My 697

True BL, Perry PJ, Burns EA: Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy (144:1220). No 1521

Wehr TA, Sack DA, Rosenthal NE: Sleep reduction as final common pathway in genesis of mania (144:201). Ap 542

Corticosterone

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229–231

Corticotropin-Releasing Factor see Corticotropin-Releasing Hormone

Corticotropin-Releasing Hormone

ACTH response to corticotropin-releasing hormone (letter). Fava, Au 1102

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229–231

CSF corticotropin-releasing factor-like immunoreactivity in depression and schizophrenia. Banki, Jy 873–877

CSF corticotropin-releasing hormone in depressed patients and normal control subjects. Roy, My 641-645

Cortisol see also Dexamethasone Suppression Test

ACTH response to corticotropin-releasing hormone (letter). Fava, Au 1102

Adrenocortical function and depressive illness in mentally retarded patients. Ruedrich, My 597-602

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229–231

Cortisol and Alzheimer's disease (letter).

Davous, reply of Greenwald, Ap 533–535

Cortisol and dexamethasone blood levels and phytohemagglutinin response (letter). Ganguli, Ap 524

Cortisol suppression index and DST (letter). Abou-Saleh, Ap 525

CSF corticotropin-releasing hormone in depressed patients and normal control subjects. Roy, My 641-645

Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262

DST status not predicted by serum sodium levels (letter). Hunt, reply of Tollefson, Se 1251–1252

5-Hydroxytryptophan-induced cortisol response and CSF 5-HIAA in depressed patients. Koyama, Mr 334–337

Hypothalamic-pituitary-adrenal system in panic disorder. Goldstein, Oc 1320– 1323

Increased adrenal weight in victims of violent suicide. Dorovini-Zis, Se 1214–1215 Influence of age and relative weight on cortisol suppression in normal subjects. Weiner, My 646-649

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170–175

Costs of Medical Care

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial). Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610–615

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system. McGuire, My 616–620

Effects of new economic climate on psychotherapeutic practice. Chodoff, Oc 1293–1297

For-profit psychiatric hospitals (letter). Buck, reply of Eisenberg, Mr 395–396

Insurance coverage of mental health care (letter). Feldman, Je 829–830

Reduced length and cost of hospital stay for major depression in patients treated with ECT. Markowitz, Au 1025–1029

Course of Psychiatric Disorder

How long should drug therapy for depression be maintained? (letter). Abou-Saleh, Se 1247–1248

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783–784

Prognostic relevance of delusions in depression: follow-up study. Kettering, Se 1154–1160

Scale for measuring patients' ability to cope (letter). French, Mr 389

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Harding, Je 718–726

Vermont longitudinal study of persons with severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727-735

Court Decisions see Forensic Psychiatry Cowper, William

Self-portrayal by depressed poet: contribution to clinical biography of William Cowper. Meyer, Fe 127–132 (letter: Charach, No 1521)

Creativity

Creativity and mental illness: prevalence rates in writers and their first-degree relatives. Andreasen, Oc 1288–1292

Problem solving and creativity during sleep (letter). Schneck, De 1621–1622

Crime

Abused to abuser: antecedents of socially deviant behaviors. Burgess, No 1431– 1436

Cruelty to Animals

Childhood cruelty to animals and later aggression against people: review. Felthous, le 710–717

Crying

More on globus hystericus syndrome (letter). Weinstein, reply of Kaplan, Ap 529

Study of crying in medically and surgically hospitalized patients. Green, Ap 442–447

Cultural Psychiatry

Current status and future directions of research on American Indian child. Yates, Se 1135-1142

International perspective on assessment of negative and positive symptoms in schizophrenia. Moscarelli, De. 1595–1598

Tardive dyskinesia and neuroleptic-induced parkinsonism in Japan. Binder, No 1494–1496

Cushing's Disease

Phenomenology and family history of affective disorder in Cushing's disease. Hudson, Jy 951–953

Cyclothymia

Borderline personality and DSM-III (letter). Nakdimen, Fe 254

Cyproheptadine

Possible toxic interaction between cyproheptadine and phenelzine (letter). Kahn, Se 1242–1243

D

Dangerousness see Violence

Day Care

Transitional day hospitalization (letter). Ness, reply of Glick, No 1520-1521 Death

Relationship between Russian roulette deaths and risk-taking behavior: controlled study. Fishbain, My 563–567 (letter: Grosz, No 1519)

Deceased Members of American Psychiatric Association

Deceased Members of American Psychiatric Association. Ja 109; Mr 369; My 675; Jy 953; Se 1153; No 1425

Deinstitutionalization

Discharged psychiatric patient: review of social, social-psychological, and psychiatric correlates of outcome. Avison, Ja 10–18

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783–784

Mandatory outpatient treatment (letter).

Bursten, reply of Appelbaum, Mr 389-390

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Harding, Je 718–726

Vermont longitudinal study of persons with severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727–735

Delirium

Association of elevated plasma anticholinergic activity with delirium in surgical patients. Golinger, Se 1218–1220

Delirium induced by verapamil (letter).

Jacobsen, Fe 248

Meperidine-induced delirium. Eisendrath, Au 1062–1065 **Delusions**

AIDS delusions: a symptom of our times (letter). Lawlor, Se 1244

Prognostic relevance of delusions in depression: follow-up study. Kettering, Se 1154-1160

Dementia see also Alzheimer's Disease

Dementia in American-Chinese nursing home population. Serby, Je 811–812

Frequency and presentation of depressive symptoms in patients with primary degenerative dementia. Lazarus, Ja 41–45; correction, Ap 542 (letters: Siegel; Drinka, Oc 1368–1369)

Platelet MAO activity in geriatric patients with depression and dementia. Alexopoulos, No 1480–1483

Single photon emission tomographic brain images in dementia of the Alzheimer type (letter). Hendrie, Mr 387-388

Denial

Denial in recipients of heart transplants (letter). Castelnuovo-Tedesco, reply of Mai, Ap 532–533

Dependent Personality Disorder

Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767–771

Depression, Diagnosis of, see also Dexamethasone Suppression Test

Attention deficit disorder and depression (letter). Pugh, Oc 1366

Defining "depression" (letter). Snaith, reply of Rodin, Je 828-829

Depression in Chinese medical inpatients. Yang, Fe 226–228

Frequency and presentation of depressive symptoms in patients with primary degenerative dementia. Lazarus, Ja 41–45; correction, Ap 542 (letters: Siegel; Drinka, Oc 1368–1369)

Overdiagnosis of depression in the medically ill (letter). Perry, reply of Rodin, Ja 125-126

Study of crying in medically and surgically hospitalized patients. Green, Ap 442–

Sympathomimetic-induced depression (letter). Twerski, Fe 252 (letter: Climko, Oc 1376–1377)

Depression, Research in

Adrenocortical function and depressive illness in mentally retarded patients. Ruedrich, My 597-602

Alterations in immunocompetence during stress, bereavement, and depression: focus on neuroendocrine regulation. Calabrese, Se 1123–1134

Biogenic amine and metabolite levels in depressed patients with high versus normal hypothalamic-pituitary-adrenocortical activity. Stokes, Jy 868–872

Bipolar mood disorder and endometriosis: preliminary findings. Lewis, De 1588– 1591

Blunted aldosterone and ACTH release after human CRH administration in depressed patients. Holsboer, Fe 229-231

Cortisol suppression index and DST (letter). Abou-Saleh, Ap 525

Critical discussion of DSM-III dysthymic disorder. Kocsis, De 1534–1542

CSF corticotropin-releasing factor-like immunoreactivity in depression and schizophrenia. Banki, Jy 873–877

CSF corticotropin-releasing hormone in depressed patients and normal control subjects. Roy, My 641-645

CSF somatostatin in patients with Alzheimer's disease, older depressed patients, and age-matched control subjects. Sunderland, Oc 1313–1316

Depression, depressive symptoms, and depressed mood among community sample of adolescents. Kashani, Jy 931–934

Dexamethasone suppression test as monitor of clinical recovery. Peselow, Ja 30–35 (letter: Solomon, Au 1109)

Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262

DST and TRH stimulation test in mood disorder subtypes. Levy, Ap 4⁻²-475

Effect of bromocriptine on affect and libido in hyperprolactinemia. Koppelman, Au 1037-1041

Emergence of depressive symptoms in patients receiving alprazolam for panic disorder. Lydiard, My 664–665

Epstein-Barr virus and depression (letters). Fudenberg; Jensen; reply of Amsterdam, Oc 1374-1375

Growth hormone response to clonidine in depression (letter). Mitchell, My 690–691

5-Hydroxytryptophan-induced cortisol response and CSF 5-HIAA in depressed patients. Koyama, Mr 334–337

Hypothalamic-pituitary-adrenal system in panic disorder. Goldstein, Oc 1320– 1323

Increased adrenal weight in victims of violent suicide. Dorovini-Zis, Se 1214–1215 Induction of depression with oxotremorine in patients with Alzheimer's disease. Davis, Ap 468–471

Life events, depressive symptoms, and immune function. Irwin, Ap 437–441

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170-175

Natural killer cell activity in major depression (letter). Mohl, De 1619

Nocturnal penile tumescence in depressed men. Thase, Ja 89–92

Perceptual and cognitive abnormalities in bulimia. Powers, No 1456–1460

Platelet MAO activity in geriatric patients with depression and dementia. Alexopoulos, No 1480–1483

Platelet membrane fluidity in Alzheimer's disease and major depression. Zubenko, Jy 860–868

Poststroke mood disorders (letter). Van Sweden B, reply of Robinson, Oc 1372– 1374

Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Georgotas, Mr 338-340

Pregnancy-related affective episodes among women with recurrent depression. Frank, Mr 288–293

- Prevalence of depression and distress in a large sample of Canadian residents, interns, and fellows. Hsu, De 1561–1566
- Prognostic relevance of delusions in depression: follow-up study. Kettering, Se 1154–1160
- Prognostic validity of DSM-III axis IV in depressed inpatients. Zimmerman, Ja 102-106
- Reduced length and cost of hospital stay for major depression in patients treated with ECT. Markowitz, Au 1025–1029
- Self-portrayal by depressed poet: contribution to clinical biography of William Cowper. Meyer, Fe 127–132 (letter: Charach, No 1521)
- Seriously depressed preschoolers. Kashani, Mr 348–350
- Short-term course of depressive symptoms in patients with eating disorders. Wamboldt, Mr 362–364 (letter: Burket, Oc 1375–1376)
- Significance of past mania or hypomania in course and outcome of major depression. Coryell, Mr 309–315
- Sleep EEG findings in depressed children and adolescents. Emslie, My 668-670
- State and personality in depressed and panic patients. Reich, Fe 181-187
- TRH-induced TSH response in healthy volunteers: relationship to psychiatric history. Loosen, Ap 455–459

Depression, Treatment of

- Can antidepressants cause mania and worsen course of affective illness? Wehr, No 1403–1411
- ECT-induced EEG asymmetry and therapeutic response in melancholia: relation to treatment electrode placement. Abrams, Mr 327–329
- ECT results and meta-analysis (letter). Uebersax, reply of Janicak, Fe 255-256
- Effects of electrode placement on efficacy of titrated, low-dose ECT. Sackeim, No 1449–1455
- How long should drug therapy for depression be maintained? (letter). Abou-Saleh, Se 1247–1248
- Lithium-responsive depressed patients (letter). Mossman, reply of Rosenthal, Mr
- Murphy's law of psychopharmacology (letter). Vernooy, Se 1244
- Potentiation of antidepressants by T₃ and lithium (letter). Harrison, reply of Garbutt, Ap 530-531
- Relapse in recurrent unipolar depression. Kupfer, Ja 86–88
- Treatment of agitated depression with alprazolam (letter). Gilbert, My 688
- Use of caffeine to lengthen seizures in ECT. Hinkle, Se 1143–1148

Detoxification Fear

- Fear of methadone maintenance (letter).
 Newman, reply of Milby, Mr 394–395
- **Developmental Processes**
- Clinical implications of adult developmental theory. Colarusso, Oc 1263-1270
- Dexamethasone Suppression Test Adrenocortical function and depressive illness in mentally retarded patients.
- Ruedrich, My 597-602 Cortisol and Alzheimer's disease (letter).

- Davous, reply of Greenwald, Ap 533-535
- Cortisol and dexamethasone blood levels and phytohemagglutinin response (letter). Ganguli, Ap 524
- Cortisol suppression index and DST (letter). Abou-Saleh, Ap 525
- Dexamethasone suppression test as monitor of clinical recovery. Peselow, Ja 30–35 (letter: Solomon, Au 1109)
- Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262
- DST and posttraumatic stress disorder. Kudler, Au 1068–1071
- DST and TRH stimulation test in mood disorder subtypes. Levy, Ap 472-475
- DST status not predicted by serum sodium levels (letter). Hunt, reply of Tollefson, Se 1251–1252
- Hypothalamic-pituitary-adrenal system in panic disorder. Goldstein, Oc 1320– 1323
- Influence of age and relative weight on cortisol suppression in normal subjects. Weiner, My 646–649
- Prognostic validity of dexamethasone suppression test: results of six-month prospective follow-up. Zimmerman, Fe 212– 214
- Psychotropic drug withdrawal and dexamethasone suppression test. Kraus, Ja 82-85
- Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493
- Serotonin reuptake inhibitors and DST status (letter). Holsboer, reply of Brown, Fe 263–264
- Diagnosis and Classification see also DSM-III
- Behavioral aspects of panic disorder. Marks, Se 1160–1165
- Changing presentation of catatonia (letter). Kay, reply of Ries, Je 834–835
- Classification and diagnosis (letter). Sandifer, Fe 252–253
- Comparison of Diagnostic Interview Schedule and clinical diagnosis. Erdman, No 1477–1480
- Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767–771
- Criteria for diagnosis of PTSD (letter). Husband, Mr 388
- Critical discussion of DSM-III dysthymic disorder. Kocsis, De 1534–1542
- Diagnosing and defining neuroleptic malignant syndrome (letter). Adityanjee, reply of Addonizio, Oc 1370–1371
- Empiricism and DSM-III (letters). Strahl; Schwartz; Raja; reply of Faust, Je 837– 838
- Field trial of DSM-III-R psychoactive substance dependence disorders. Rounsaville, Mr 351–355
- Francis Bacon and DSM-III (letter). Sheeley, reply of Faust, Mr 385–386
- More on empiricist and his new clothes (letters). Hankoff; Spital; Rifkin; reply of Faust, My 691-693

- Onset of Gilles de la Tourette's syndrome before 1 year of age. Burd, Au 1066– 1067
- Pisa syndrome, or pleurothotonus (letter). Pilette, reply of Guy, Jy 969–970
- Posttraumatic stress disorder in Japanese prisoners of war (letter). Burges Watson, reply of Tennant, Au 1110-1111
- Progress in classification of functional psychoses. Coryell, No 1471–1474
- Proposed changes in *DSM-III* substance dependence criteria (letters). Segal; Blackwell; Prado; reply of Rounsaville, Fe 257–259
- Psychosis in obsessive-compulsive disorder (letter). Chopra, Oc 1363-1364
- Schizoaffective mania reconsidered. Levinson, Ap 415-425
- "Simple dissociative disorder": subcategory in DSM-III-R? (letter). Saxena, Ap 524-525
- Systematic approach to delineation of personality disorders. Livesley, Je 772–777
- Use of DSM-III axis III in recording physical illness in psychiatric patients. Maricle, No 1484–1486

Diagnosis, Differential

- Attention deficit disorder and depression (letter). Pugh, Oc 1366
- Clinical nonrecognition of neuroleptic-induced movement disorders: cautionary study. Weiden, Se 1148–1153
- Comparison of Diagnostic Interview Schedule and clinical diagnosis. Erdman, No 1477–1480
- Defining "depression" (letter). Snaith, reply of Rodin, Je 828-829
- Depression in Chinese medical inpatients. Yang, Fe 226–228
- Dexamethasone suppression test: overview of its current status in psychiatry. APA Task Force on Laboratory Tests in Psychiatry, Oc 1253–1262
- Differential diagnosis of mute patients (letter). David, reply of Altshuler, Au 1113
- Family diagnoses missed on clinical inpatient service. Baker, My 630-632
- Family history in clinical psychiatric practice (editorial). Swift, My 628-629
- First-rank symptoms as diagnostic clue to multiple personality disorder. Kluft, Mr 293–298 (letter: Fox, Oc 1377–1378)
- Lethal catatonia and neuroleptic malignant syndrome (letter). Kalinowsky, reply of Mann, Au 1106–1107
- Neuroleptic malignant syndrome: facts and controversies (letter). Adityanjee, reply of Sternberg, Au 1104–1105
- Overdiagnosis of depression in the medically ill (letter). Perry, reply of Rodin, Ja 125–126
- Posttraumatic stress disorder in Japanese prisoners of war (letter). Burges Watson, reply of Tennant, Au 1110–1111
- Progress in classification of functional psychoses. Coryell, No 1471–1474
- Research diagnostic problems (letter). Rapaport, Je 826–827
- So-called borderline children (letter). Gualtieri, reply of Greenman, Je 832-833
- Study of crying in medically and surgically

Am I Psychiatry 144:12. December 1987

hospitalized patients. Green, Ap 442-

Symptom definition in evaluation of globus (letter). Strang, reply of Brown, Oc 1379–1380

Symptoms of neuroleptic malignant syndrome (letter). Friedman, reply of Addonizio, Au 1105–1106

Usefulness of dexamethasone suppression test (letter). Solomon, reply of Peselow, Au 1109-1110

Diagnosis-Related Groups

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial). Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610-615

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system. McGuire, My 616–620

Diagnostic Interview Schedule

Comparison of Diagnostic Interview Schedule and clinical diagnosis. Erdman, No 1477–1480

Diazepam

Diazepam-induced amnesia; neuropharmacological model of "organic amnestic syndrome." Wolkowitz, Ja 25–29

Digitalis

Toxic neuropsychiatric effects of digoxin at therapeutic serum concentrations. Eisendrath, Ap 506-507

Digoxin

Toxic neuropsychiatric effects of digoxin at therapeutic serum concentrations. Eisendrath, Ap 506-507

Diltiazem

Mediation of "calcium antagonist" effects by dopamine receptor blockade (letter). Nurnberger, Jy 966–967

Discrimination

Position statement on HIV related discrimination (off acts). American Psychiatric Association, Au 1122

Dissociation

"Simple dissociative disorder": subcategory in DSM-III-R? (letter). Saxena, Ap 524-525

Disulfiram

Psychiatric complications of disulfiram treatment. Branchey, Oci 1310–1312

L-Dopa

L-Dopa challenge and relapse in schizophrenia. Davidson, Jy 934-938

Dopamine

Abnormal prolactin response to haloperidol challenge in men with schizophrenia. Keks, Oc 1335–1337

Clinical correlates of platelet prostaglandin receptor subsensitivity in schizophrenia. Kanof, De 1556–1560

Dosage

Comparative trial of pharmacologic strategies in schizophrenia. | Carpenter, No 1466–1470

Depot neuroleptics for acutely psychotic patients (letter). Turns, Au 1099

Doses and blood levels of tricyclic antidepressants (letter). Berman, Fe 250-251

Dystonia, neuroleptic dose, and anticholinergic drugs (letter). McEvoy, reply of Winslow, Mr 393-394

Inadequate plasma concentrations in some high-dose methadone maintenance patients. Tennant, Oc 1349–1350

Doxepin

Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. True, Se 1220–1221; correction, No 1521

Dreams and Dreaming

Dream process in asthmatic subjects with nocturnal attacks. Monday, My 638-640 Long-term effects of extreme situational stress on sleep and dreaming. Hefez, Mr 344-347

DRGs see Diagnosis-Related Groups Drinking see Alcohol and Alcoholism Dropouts

Patient attrition in dynamically oriented treatment groups. Roback, Ap 426–431 Drug Abuse

Abuse of fluoxetine by patient with anorexia nervosa (letter). Wilcox, Au 1100

Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Giannini, Se 1207–1209

Drug and alcohol abuse by bulimic women and their families. Bulik, De 1604–1606 Heroin addiction treated by atropine coma (letter). Wandzel, Se 1243

Heroin-induced vomiting in bulimia (letter). Mitchell, Fe 249–250

Misuse and abuse of benzodiazepines (letter). Ciccone, reply of Garvey, Se 1246-1247

More on cocaine and panic disorder (letter). Pohl, Oc 1363

Outpatient group therapy for schizophrenic substance abusers. Hellerstein, Oc 1337– 1339

Phencyclidine and "crack"-precipitated panic disorder (letter). Price, My 686– 687

Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698–702 (letter: Milman, No 1515)

Psychiatrist and solvent-inhalant abuse: recognition, assessment, and treatment. Westermeyer, Jy 903-907

Relief of obsessive-compulsive symptoms by LSD and psilocin (letter). Leonard, Se 1239–1240

Smoking of prescription anticholinergic drugs (letter). Brower, Mr 383

Drug Dependence see also Addiction

Field trial of *DSM-III-R* psychoactive substance dependence disorders. Rounsaville, Mr 351–355

Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698–702 (letter: Milman, No 1515)

Proposed changes in *DSM-III* substance dependence criteria (letters). Segal; Blackwell; Prado; reply of Rounsaville, Fe 257-259

Twelve-month follow-up of psychotherapy for opiate dependence. Woody, My 590– 596

Drug Discontinuation see Withdrawal From Drugs

Drug Interactions see also Combined Drug
Therapy

Amoxapine and neuroleptic malignant syndrome (letter). Lesaca, No 1514

Interaction between thioridazine and naltrexone (letter). Maany, Jy 966

Mania induced by lithium augmentation (letter). Price, Mr 389

Possible toxic interaction between cyproheptadine and phenelzine (letter). Kahn, Se 1242–1243

Potentiation of propoxyphene by phenelzine (letter). Garbutt, Fe 251–252

Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. True, Se 1220–1221; correction, No 1521

Drug Side Effects, see also specific drugs Association of elevated plasma anticholinergic activity with delirium in surgical patients. Golinger, Se 1218–1220

Drug Side Effects—Alprazolam

Emergence of depressive symptoms in patients receiving alprazolam for panic disorder. Lydiard, My 664-665

Sexual side effects of alprazolam (letter). Lydiard, Fe 254–255

Drug Side Effects—Amantadine

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573–577

Drug Side Effects—Antidepressants

Allergy to tartrazine in antidepressants. Pohl, Fe 237–238 (letter: Hollander, Se 1247)

Amoxapine and neuroleptic malignant syndrome (letter). Lesaca, No 1514

Anorgasmia caused by MAOI (letter). Jacobson, Ap 527

Can antidepressants cause mania and worsen course of affective illness? Wehr, No 1403–1411

Electrocardiographic effects of nortriptyline, phenelzine, and placebo under optimal treatment conditions. Georgotas, Je 798–801

Hypomania induced by sertraline, a new serotonin reuptake inhibitor (letter). Laporta, No 1513–1514

Increased libido with trazodone (letter). Sullivan, Jy 967

Libido in women receiving trazodone (letters). Nakdimen; Jaffe; reply of Gartrell, Ja 123

Mania precipitated by fluoxetine (letter). LeBegue, De 1620

Murphy's law of psychopharmacology (letter). Vernooy, Se 1244

Postural hypotension with syncope possibly precipitated by trazodone (letter). Spivak, No 1512–1513

Reversal by bethanechol of imipramine-induced ejaculatory dysfunction (letter). Segraves, Se 1243–1244

Spontaneous remission of MAOI-induced anorgasmia. Nurnberg, Je 805–807

Use of tricyclic antidepressants in patient with malignant hyperthermia (letter).

Richter, Ap 526

Yohimbine- and tranylcypromine-induced postural hypotension (letter). Hsu, Ja 119

Drug Side Effects—Antihistamines

Depression and decongestants (letter). Climko, reply of Twerski, Oc 1376–1377

Drug Side Effects—Benzodiazepines

Diazepam-induced amnesia: neuropharmacological model of "organic amnestic syndrome." Wolkowitz, Ja 25–29

Drug Side Effects—Digoxin

Toxic neuropsychiatric effects of digoxin at therapeutic serum concentrations. Eisendrath, Ap 506–507

Drug Side Effects—Disulfiram

Psychiatric complications of disulfiram treatment. Branchey, Oc 1310–1312

Drug Side Effects-Lidocaine

"Doom anxiety" and delirium in lidocaine toxicity. Saravay, Fe 159–163 (letters: Silber, Oc 1365; Mesulam, De 1623–1624)

Drug Side Effects-Lithium

Early identification of renal problems in patients receiving chronic lithium treatment. Samiy, My 670-672

Renal function and lithium (letter). Johnson, reply of DePaulo, Je 822-823

Drug Side Effects-Meperidine

Meperidine-induced delirium. Eisendrath, Au 1062–1065

Drug Side Effects-Metoclopramide

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Drug Side Effects-Neuroleptics

Clinical forms of severe tardive dyskinesia. Gardos, Jy 895–902

Clinical nonrecognition of neuroleptic-induced movement disorders: cautionary study. Weiden, Se 1148–1153

Dystonia, neuroleptic dose, and anticholinergic drugs (letter). McEvoy, reply of Winslow, Mr 393–394

Follow-up study of 11 patients with potentially reversible tardive dyskinesia. Yagi, No 1496–1498

Frequency and presentation of neuroleptic malignant syndrome: prospective study. Keck, Oc 1344–1346

Lithium and extrapyramidal side effects of neuroleptics (letter). Weiden, reply of Goldney, Fe 264–265

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Priapism treated with benztropine (letter). Greenberg, Mr 384–385

Tardive dyskinesia and neuroleptic-induced parkinsonism in Japan. Binder, No 1494–1496

Tardive dyskinesia: serious side effect? (letter). Dean, reply of Baldessarini, Fe 261–262

Worsening of Tourette's disorder due to neuroleptic-induced akathisia. Weiden, Ap 504–505

Drug Side Effects—Phenylpropanolamine Sympathomimetic-induced depression (letter). Twerski, Fe 252 (letter: Climko, Oc 1376–1377)

Drug Side Effects-Pimozide

ECG changes during haloperidol and pimo-

zide treatment of Tourette's disorder. Fulop, My 673-675

Drug Side Effects—Trihexyphenidyl

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573–577

Drug Side Effects-Verapamil

Delirium induced by verapamil (letter). Jacobsen, Fe 248

Drugs, Psychotropic, see also specific drugs Comparative trial of pharmacologic strategies in schizophrenia. Carpenter, No 1466–1470

Effect of pharmacotherapy on psychoanalytic process: case report of modified analysis. Wylie, Ap 489–492

Human Psychopharmacology (letter). Edwards, Ap 524

Informed consent for neuroleptics and other psychotropic agents (letter). Pinta, Se 1244–1245

Pharmaco-epidemiology in 136 hospitalized schizophrenic patients. Zito, Je 778–782

Psychotropic drug withdrawal and dexamethasone suppression test. Kraus, Ja 82-85

Sustained remission in drug-free schizophrenic patients. Fenton, Oc 1306–1309 Drugs, Tolerance to

Absence of acquired tolerance to neuroleptics in schizophrenic patients. Palmstierna, Au 1084–1085

DSM-III

Borderline personality and DSM-III (letter). Nakdimen, Fe 254

Classification and diagnosis (letter). Sandifer, Fe 252–253

Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767–771

Critical discussion of *DSM-III* dysthymic disorder. Kocsis, De 1534–1542

Empiricism and DSM-III (letters). Strahl; Schwartz; Raja; reply of Faust, Je 837– 838

Field trial of *DSM-III-R* psychoactive substance dependence disorders. Rounsaville, Mr 351–355

Francis Bacon and DSM-III (letter). Sheeley, reply of Faust, Mr 385–386

More on empiricist and his new clothes (letters). Hankoff; Spital; Rifkin; reply of Faust, My 691-693

More on Ganser's syndrome and DSM-III (letter). Kerbeshian, Ja 119-120

Prognostic validity of DSM-III axis IV in depressed inpatients. Zimmerman, Ja 102–106

Progress in classification of functional psychoses. Coryell, No 1471–1474

Proposed changes in *DSM-III* substance dependence criteria (letters). Segal; Blackwell; Prado; reply of Rounsaville, Fe 257–259

Reliability of axis V of DSM-III (letter). Williams, Ap 536

"Simple dissociative disorder": subcategory in DSM-III-R? (letter). Saxena, Ap 524—525

Use of DSM-III axis III in recording physical illness in psychiatric patients. Maricle, No 1484–1486

DST see Dexamethasone Suppression Test Duty to Protect

AIDS antibody tests on inpatient psychiatric units. Binder, Fe 176–181

Protecting third parties: decade after Tarasoff. Mills, Ja 68-74 (letter: Raskin, Au 1107)

Dyes

Allergy to tartrazine in antidepressants. Pohl, Fe 237–238 (letter: Hollander, Se 1247)

Dyspepsia

DSM-III diagnoses associated with dyspepsia of unknown cause. Magni, Se 1222–1223

Dysphoria

Dysphoria associated with methylphenidate infusion in borderline personality disorder. Lucas, De 1577–1579

Dysthymic Disorder

Critical discussion of *DSM-III* dysthymic disorder. Kocsis, De 1577–1579

E.

Eating Disorders see also Anorexia Nervosa; Bulimia

Athletic amenorrhea, major affective disorders, and eating disorders. Gadpaille, Jy 939-942

Eating Attitudes Test scores of patients with obsessive-compulsive disorder (letter). Joffe, No 1510–1511

Short-term course of depressive symptoms in patients with eating disorders. Wamboldt, Mr 362–364 (letter: Burket, Oc 1375–1376)

20-month follow-up study of 628 women with eating disorders, I: course and severity. Yager, Se 1172–1177

ECĆ

ECG changes during haloperidol and pimozide treatment of Tourette's disorder. Fulop, My 673–675

ECT

ECT-induced EEG asymmetry and therapeutic response in melancholia: relation to treatment electrode placement. Abrams, Mr 327–329

ECT results and meta-analysis (letter).

Uebersax, reply of Janicak, Fe 255–256

Effects of electrode placement on efficacy of

Effects of electrode placement on efficacy of titrated, low-dose ECT. Sackeim, No 1449–1455

Facilitation of ECT by caffeine pretreatment. Shapira, Se 1199–1202

New technology in convulsive therapy: challenge in training (editorial). Fink, Se 1195–1198

Reduced length and cost of hospital stay for major depression in patients treated with ECT. Markowitz, Au 1025–1029

Use of caffeine to lengthen seizures in ECT. Hinkle, Se 1143–1148

Use of ECT in United States in 1975 and 1980. Thompson, My 557-562

Edrophonium

Growth hormone response to edrophonium in Alzheimer's disease. Thienhaus, Au 1049–1052

Education, Medical

Model for ethical problem solving in medicine, with practical applications. Hundert, Jy 839-846

Prevalence of depression and distress in a large sample of Canadian residents, interns, and fellows. Hsu, De 1561-1566

Psychiatric problems of medical students and their spouses (letter). Myers, Ap 541-542

Stress and psychiatric training (letter). Auster, Je 829

Education, Psychiatric

Applicants' choice of residency training program. Sledge, Ap 501-503

Are we training too many psychiatrists? Yager, Au 1042–1048

Clinician-researchers in psychiatry (letters). Meador-Woodruff; Malenka; reply of Burke, Ap 535

Compact camcorders for teaching psychiatric interviewing (letter). Shaner, Se 1245 Evolving subspecialization of psychiatry: implications for profession. Yager, No 1461-1465

Future of psychiatry. Detre, My 621-625 Keeping clinician-researcher alive (letter). Sarasua, reply of Burke, Fe 262-263

Model for ethical problem solving in medicine, with practical applications. Hundert, Jy 839-846

More on psychiatrist-patient sexual contact (letters). DeRosis; Carson, My 688-689 New technology in convulsive therapy:

challenge in training (editorial). Fink, Se 1195–1198

Psychiatric problems of medical students and their spouses (letter). Myers, Ap 541-542

Psychiatrist-patient sexual contact (letter). Levenson, reply of Gartrell, Ap 529-530 Ratings of videotaped simulated patient interviews and four other methods of evaluating psychiatry clerkship. Mumford, Mr 316-322

Shifts in attitudes among psychiatric residents: serial measures over 10 years. Coryell, Jy 913-917

Stress and psychiatric training (letter). Auster, Je 829

EEG

ECT-induced EEG asymmetry and therapeutic response in melancholia: relation to treatment electrode Abrams, Mr 327–329 placement.

Patients with panic attacks and abnormal EEG results. Edlund, Ap 508-509 (letter: Van Sweden, De 1624-1625)

Ego Functions

More on The Ego Ideal (letter). Morrison, Ap 528

Washington University Sentence Completion Test compared with other measures of adult ego development. Vaillant, Se 1189-1194

Ejaculatory Problems see Sexual Disorders **Elderly Patients see Geriatric Psychiatry** Electroconvulsive Therapy see ECT

Emergency Psychiatry

Depot neuroleptics for acutely psychotic patients (letter). Turns, Au 1099

Retrospective study of adolescents' visits to general hospital psychiatric emergency service. Hillard, Ap 432+436

Emotion see also Expressed Emotion Levels of emotional awareness: cognitivedevelopmental theory and its application to psychopathology. Lane, Fe 133-143; correction, Ap 542

Empiricism

Empiricism and DSM-III (letters). Strahl; Schwartz; Raja; reply of Faust, Je 837-

Francis Bacon and DSM-III (letter). Sheeley, reply of Faust, Mr 385-386

More on empiricist and his new clothes (letters). Hankoff; Spital; Rifkin; reply of Faust, My 691-693

Endometriosis

Bipolar mood disorder and endometriosis: preliminary findings. Lewis, De 1588-1591

Epidemiology

Depression, depressive symptoms, and depressed mood among community sample of adolescents. Kashani, Jy 931-934

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783-784

Mental illness in Jerusalem (letters). Feinberg; Daghestani; reply of Rahav, Je

Pharmaco-epidemiology in 136 hospitalized schizophrenic patients. Zito, Je 778-

Psychiatric disorders in community sample of adolescents. Kashani, My 584-589; correction, Au 1114

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Harding, Je 718-726

Vermont longitudinal study of persons with severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727-735

Epilepsy see Seizures

Epinephrine

Biogenic amine and metabolite levels in depressed patients with high versus normal hypothalamic-pituitary-adrenocortical activity. Stokes, Jy 868-872

Epstein-Barr Virus

Epstein-Barr virus and depression (letters). Fudenberg; Jensen; reply of Amsterdam, Oc 1374–1375

Estrogens

Estrogen-progesterone combination: another mood stabilizer? (letter). Chouinard, Je 826

Failure of nalmefene and estrogen to improve memory in Alzheimer's disease (letter). Weiss, Mr 386-387

Ethics

Alcohol use in volunteers 1 year after study requiring alcohol intake (letter). Willenbring, Je 825

For-profit psychiatric hospitals (letter). Buck, reply of Eisenberg, Mr 395-396

Model for ethical problem solving in medicine, with practical applications. Hundert, Jy 839–846

More on psychiatrist-patient sexual contact (letters). DeRosis; Carson, My 688-689 Psychiatrist-patient sexual contact (letter). Levenson, reply of Gartrell, Ap 529-530

Psychiatrist-patient sexual contact: results

of national survey, II: psychiatrists' attitudes. Herman, Fe 164-169 (letter: Kavoussi, Se 1249-1250)

Stress and psychiatric training (letter). Auster, Je 829

Use of animals in research (letter). Wise, reply of Pincus, Au 1111

Ethnic Differences see Cultural Psychiatry Evaluation

Ratings of videotaped simulated patient interviews and four other methods of evaluating psychiatry clerkship. Mumford, Mr 316-322

Experiential Sampling

Experiential sampling in study of multiple personality disorder. Loewenstein, Ja 19-24

Expressed Emotion

Expressed emotion (letter). Stitelman, reply of Koenigsberg, Au 1111-1112

Extrapyramidal Side Effects

Clinical nonrecognition of neuroleptic-induced movement disorders: cautionary study. Weiden, Se 1148-1153

Dystonia, neuroleptic dose, and anticholinergic drugs (letter). McEvoy, reply of Winslow, Mr 393-394

Tardive dyskinesia and neuroleptic-induced parkinsonism in Japan. Bir.der, No 1494-1496

Eyes

Eye versus skin phototherapy of seasonal affective disorder. Wehr, Je 753-757

Loss of vision due to central serous chorioretinopathy following psychological stress. Gelber, Ja 46-50

Self-inflicted eye injury (letter). Oren, Fe 248-249

F

Facial Expression

Ethological study of facial behavior in nonparanoid and paranoid schizophrenic patients. Pitman, Ja 99-102

Families

Childhood experiences of homeless men. Susser, De 1599-1601

Expressed emotion (letter). Stitelman, reply of Koenigsberg, Au 1111-1112

Family diagnoses missed on clinical inpatient service. Baker, My 630-632

Folie à famille: shared paranoid disorder in Vietnam veteran and his family. Glassman, My 658-660

New female perceptions of parental power. McDermott, Au 1086-1087

Family History see Genetics

Fathers

New female perceptions of parental power. McDermott, Au 1086-1087

Feighner Criteria

Progress in classification of functional psychoses. Coryell, No 1471-1474

Flashbacks

Laboratory procedure for induction of flashbacks. Rainey, Oc 1317-1319

Fluoxetine

Abuse of fluoxetine by patient with anorexia nervosa (letter). Wilcox, Au 1100 Mania precipitated by fluoxetine (letter). LeBegue, De 1620

Serotonin reuptake inhibitors and DST sta-

tus (letter). Holsboer, reply of Brown, Fe

Treatment of anorexia nervosa patient with fluoxetine (letter). Ferguson, Se 1239

Fluphenazine

Neuroleptic responsivity of negative and positive symptoms in schizophrenia. Breier, De 1549–1555

Fluvoxamine

Fluvoxamine treatment of obsessive-compulsive disorder. Perse, De 1543–1548

Treatment of severe obsessive-compulsive disorder with fluvoxamine. Price, Au 1059–1061

Flying

Treatment of patient with airplane phobia (letter). Forrest, Ap 526–527

Folie à Famille

Folie à famille: shared paranoid disorder in Vietnam veteran and his family. Glassman, My 658-660

Forensic Psychiatry

Coerced outpatient treatment (letter).
Mossman, reply of Geller, Jy 968-969

Competency determinations in civil commitment. Bloom, Fe 193–196

Effects of Jamison-Farabee consent decree: due process protection for involuntary psychiatric patients treated with psychoactive medication. Hargreaves, Fe 188– 192

Guidelines on confidentiality (off acts). American Psychiatric Association, No 1522

Legal basis of forensic psychiatry: statutorily mandated psychiatric diagnoses. Bloom, Jy 847--853

Mandatory outpatient treatment (letter). Bursten, reply of Appelbaum, Mr 389–390

Medicine court: Rogers in practice. Veliz, Ja 62-67

Outpatient civil commitment (letter). Leong; replies of Bursten, Geller, My 694-696

Patient incompetence in legal settings (letter). Goldstein, reply of Gutheil, Fe

Predictive validity of judgments of dangerousness in emergency civil commitment. McNiel, Fe 197–200

Protecting third parties: decade after Tarasoff. Mills, Ja 68–74 (letter: Raskin, Au 1107)

Should young children testify in cases of sexual abuse? Yates, Ap 476-480

Unexpected consequence of treatment for attention deficit disorder (letter). Merrill, Fe 250

Voluntary and involuntary patients (letter). Geller, reply of Okin, Au 1112–1113

G

Gambling

Follow-up of pathological gamblers after treatment. Taber, Je 757–761 South Oaks Gambling Screen (SOGS): new

South Oaks Gambling Screen (SOGS): new instrument for identification of pathological gamblers. Lesieur, Se 1184–1188

Ganser's Syndrome

More on Ganser's syndrome and DSM-III (letter). Kerbeshian, Ja 119–120

Gender see Sex Differences

Genetics

Creativity and mental illness: prevalence rates in writers and their first-degree relatives. Andreasen, Oc 1288–1292

Drug and alcohol abuse by bulimic women and their families. Bulik, De 1604–1606 Familial schizophrenia and treatment response. Silverman, Oc 1271–1276

Family diagnoses missed on clinical inpatient service. Baker, My 630-632

Family history in clinical psychiatric practice (editorial). Swift, My 628-629

Family study of generalized anxiety disorder. Noyes, Au 1019-1024

Genetic contributions to human fatness: adoption study. Price, Au 1003-1008

High rate of affective disorders in probands with attention deficit disorder and in their relatives: controlled family study. Biederman, Mr 330-333 (letter: Pugh, Oc 1266)

Phenomenology and family history of affective disorder in Cushing's disease. Hudson, Jy 951–953

Serum prolactin levels in sons of alcoholics and control subjects. Schuckit, Jy 854– 859

Geriatric Psychiatry

Antiandrogen treatment of aberrant sexual activity (letter). Ross, No 1511

CSF somatostatin in patients with Alzheimer's disease, older depressed patients, and age-matched control subjects. Sunderland, Oc 1313–1316

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573-577

Frequency and presentation of depressive symptoms in patients with primary degenerative dementia. Lazarus, Ja 41–45; correction, Ap 542 (letters: Siegel; Drinka, Oc 1368–1369)

Platelet MAO activity in geriatric patients with depression and dementia. Alexopoulos, No 1480–1483

Postural hypotension with syncope possibly precipitated by trazodone (letter). Spivak, No 1512–1513

Psychiatry and nursing home. Borson, No 1412-1418

Gilles de la Tourette's Syndrome see Tourette's Disorder

Globus Hystericus Syndrome

Globus hystericus and panic attacks (letter). Liebowitz, reply of Jenike, Mr 390-391

More on globus hystericus syndrome (letters). Kaplan; Rosenthal; Weinstein; reply of Jenike, Ap 528–529

Symptom definition in evaluation of globus (letter). Strang, reply of Brown, Oc 1379–1380

Glucose

Effects of sugar and aspartame on aggression and activity in children. Kruesi, No 1487–1490

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170–175

Group Awareness Training

Effects of large group awareness training on participants' psychiatric status. Lieber-

man, Ap 460-464

Group Therapy

Outpatient group therapy for schizophrenic substance abusers. Hellerstein, Oc 1337–1339

Patient attrition in dynamically oriented treatment groups. Roback, Ap 426–431 Growth Hormone see Human Growth Hormone

H

Hair

Extreme haircutting and psychosis (letter). Strawn, Au 1102–1103

Hallucinations

Auditory hallucinations and subvocal speech in schizophrenic patients. Bick, Fe 222–225 (letter: Evenson, Oc 1364–1365)

Auditory hallucinations in combat-related chronic posttraumatic stress disorder. Mueser, Mr 299–302

Clinical significance of command hallucinations. Hellerstein, Fe 219–221

Hallucinations as conversion symptoms (letter). McKegney, reply of Asaad, My 696-697

Hemodialysis in schizophrenia (letters). Carpenter; Frankenburg; reply of Asaad, Je 830

What about bicameral mind? (letter). Moffic, reply of Asaad, My 696

Haloperidol

Abnormal prolactin response to haloperidol challenge in men with schizophrenia. Keks, Oc 1335–1337

Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Giannini, Se 1207–1209

Familial schizophrenia and treatment response. Silverman, Oc 1271–1276

Haloperidol as alternative to lithium in pregnant women (letter). van Gent, Se 1241

Head Injury

Mania following head trauma. Shukla, Ja 93–96 (letter: Bell, Oc 1378–1379)

Naltrexone treatment for postconcussional syndrome. Tennant, Je 813–814

Health

Some physiologic antecedents of adult mental health. Phillips, Au 1009–1013

Health Maintenance Organizations

Use of outpatient mental health services over time in health maintenance organization and fee-for-service plans. Manning, Mr 283-287

Heart Rate

Cardiac rate and rhythm in panic patients. Shear, My 633-637

Electrocardiographic effects of nortriptyline, phenelzine, and placebo under optimal treatment conditions. Georgotas, Je 798–801

Some physiologic antecedents of adult mental health. Phillips, Au 1009–1013

Heart Transplant

Denial in recipients of heart transplants (letter). Castelnuovo-Tedesco, reply of Mai, Ap 532-533

Idiopathic cardiomyopathy and panic disorder: clinical association in cardiac transplant candidates. Kahn, Oc 1327-

Hemispheric Asymmetry see Lateralization, Cerebral

Hemodialysis

Hemodialysis in schizophrenia (letters). Carpenter; Frankenburg; reply of Asaad, Je 830

Hemoglobin

Hemoglobin and erythrocyte indices in panic disorder (letter). Balon, Ap 539-. 540

Heroin

Heroin addiction treated by atropine coma (letter). Wandzel, Se 1243

Heroin-induced vomiting in bulimia (letter). Mitchell, Fe 249-250

HIV see Human Immunodeficiency Virus HMOs see Health Maintenance Organizations

Hoigne's Syndrome

Doom anxiety and Hoigne's syndrome (letter). Silber, Oc 1365

Holding Environment

Holding environment (letter). Grolnick, Oc 1365–1366

Homelessness

Childhood experiences of homeless men. Susser, De 1599-1601

Homicide

Suicide and homicide in United States: epidemiologic study of violent death, population changes, and potential for prediction. Holinger, Fe 215-219

Homosexuality

Changes in AIDS risk behaviors among homosexual male physicians and university students. Klein, Je 742-747

Comments on review of brief psychotherapies (letter). Harris, reply of Ursano, No 1515-1518

Homophobia among physicians and nurses treating AIDS patients (letter). Kalman, No 1514-1515

Sexual practices among patients with borderline personality disorder. Zubenko, Je 748-752 (letter: Stone, De 1622-1623)

Hopkins Symptom Checklist

Indochinese versions of Hopkins Symptom Checklist-25: screening instrument for psychiatric care of refugees. Mollica, Ap 497-500

Hormones

Estrogen-progesterone combination: another mood stabilizer? (letter). Chouinard, Je 826

Hospital Psychiatry

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial)! Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610-615

Conceptual and methodological issues in comparison of inpatient psychiatric facilities. Goodban, No 1437–1443

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system. McGuire, My 616-620

Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: preliminary report. Fulop, Jy 878-882

Long-term hospital treatment of borderline patients: descriptive outcome study. Tucker, No 1443-1448

Transitional day hospitalization (letter). Ness, reply of Glick, No 1520-1521

Voluntary and involuntary patients (letter). Geller, reply of Okin, Au 1112-1113 Hospitalization

Stressful life events and psychiatric hospitalization of mentally retarded patients. Stack, My 661-663

Hospitalization, Involuntary, see Commitment, Civil

Human Growth Hormone

Growth hormone response to clonidine in depression (letter). Mitchell, My 690-691

Growth hormone response to edrophonium in Alzheimer's disease. Thienhaus, Au 1049-1052

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170-175

Human Immunodeficiency Virus

Position statement on HIV-related discrimination (off acts). American Psychiatric Association, Au 1122

Symptomatic HIV infection of CNS in patient without clinical evidence of immune deficiency. Beckett, Oc 1342-1344

5-Hydroxyindoleacetic Acid

5-Hydroxytryptophan-induced cortisol response and CSF 5-HIAA in depressed patients. Koyama, Mr 334-337

5-Hydroxytryptophan

5-Hydroxytryptophan-induced cortisol response and CSF 5-HIAA in depressed patients. Koyama, Mr 334-337

Hyperactivity

Treatment of hyperactive children with Dphenylalanine. Zametkin, Je 792-794

Hyperthermia

Use of tricyclic antidepressants in patient with malignant hyperthermia (letter). Richter, Ap 526

Hypochondriasis

Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Andrews, Oc 1331-1334

Hypoglycemia

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170-175

Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. True, Se 1220-1221; correction, No 1521

Hypomania see Mania

Hyponatremia

Absence of carbamazepine-induced hyponatremia among patients also given lithium. Vieweg, Jy 943-947

Prevention of episodic water intoxication with target weight procedure. Goldman, Mr 365-366 (letter: Koczapski, De 1626-1627)

Hypothalamic-Pituitary-Adrenal Axis

ACTH response to corticotropin releasing hormone (letter). Fava, Au 1102

Biogenic amine and metabolite levels in depressed patients with high versus normal hypothalamic-pituitary-adrenocortical activity. Stokes, Jy 868-872

CSF corticotropin-releasing factor-like immunoreactivity in depression and schizophrenia. Banki, Jy 873-877

Hypothalamic-pituitary-adrenal system in panic disorder. Goldstein, Oc 1320-1323

Hysteria

Hallucinations as conversion symptoms (letter). McKegney, reply of Asaad, My 696-697

"Simple dissociative disorder": subcategory in DSM-III-R? (letter). Saxena. Ap 524-

I

Imipramine

Imipramine treatment of agoraphobia (letter). Robinson, My 687

Naturalistic study of imipramine in panic disorder and agoraphobia. Aronson, Au 1014-1019

Reversal by bethanechol of imip-amine-induced ejaculatory dysfunction (letter). Segraves, Se 1243-1244

Immune Function

Alterations in immunocompeterce during stress, bereavement, and depression: focus on neuroendocrine regulation. Calabrese, Se 1123-1134

Cortisol and dexamethasone blood levels and phytohemagglutinin response (letter). Ganguli, Ap 524

Epstein-Barr virus and depression (letters). Fudenberg; Jensen; reply of Amsterdam, Oc 1374-1375

Life events, depressive symptoms, and immune function. Irwin, Ap 437-441

Natural killer cell activity in major depression (letter). Mohl, De 1619

Symptomatic HIV infection of CNS in patient without clinical evidence of immune deficiency. Beckett, Oc 1342-1344 Impulsivity

Cognitive style of patients with bulimic and diet-restricting anorexia nervosa. Toner, Ap 510-512

Incest see also Sexual Abuse

Long-term effects of incest (letter). Evenson, Jy 967-968

Reports of childhood incest and current behavior of chronically hospitalized psychotic women. Beck, No 1474-1476 Income

Psychiatrists' income (letter). Thompson, reply of Astrachan, Mr 391

Indians, American, see Native Americans Informed Consent

Informed consent for neuroleptics and other psychotropic agents (letter). Pinta, Se 1244-1245

Inhalants

Psychiatrist and solvent-inhalant abuse: recognition, assessment, and treatment. Westermeyer, Jy 903-907

Inpatients see Hospital Psychiatry Insanity Defense

Legal basis of forensic psychiatry: statutorily mandated psychiatric diagnoses. Bloom, Jy 847–853

Insect Repellent

Psychotic reaction to insect repellent (letter). Poe, Au 1103-1104

Insurance

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial). Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610–615

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system. McGuire, My 616–620

Effects of new economic climate on psychotherapeutic practice. Chodoff, Oc 1293–1297

Insurance coverage of mental health care (letter). Feldman, Je 829–830

Use of outpatient mental health services over time in health maintenance organization and fee-for-service plans. Manning, Mr 283–287

Intelligence

Temperament and intellectual development: longitudinal study from infancy to four years. Maziade, Fe 144–150

Interpersonal Relations

Psychological and interpersonal issues in space. Kanas, Je 703–709

Interviewing

Compact camcorders for teaching psychiatric interviewing (letter). Shaner, Se 1245 Ratings of videotaped simulated patient interviews and four other methods of evaluating psychiatry clerkship. Mumford, Mr 316–322

Intimacy

Elements of private therapeutic interview. Zinberg, De 1527–1533

Israel

Posttraumatic stress disorder among frontline soldiers with combat stress reaction: 1982 Israeli experience. Solomon, Ap 448-454

Italy

International perspective on assessment of negative and positive symptoms in schizophrenia. Moscarelli, De 1595–1598

J

Jamison v Farabee

Effects of Jamison-Farabee consent decree: due process protection for involuntary psychiatric patients treated with psychoactive medication. Hargreaves, Fe 188–192

Japanese

Follow-up study of 11 patients with potentially reversible tardive dyskinesia. Yagi, No 1496–1498

Tardive dyskinesia and neuroleptic-induced

parkinsonism in Japan. Binder, No 1494-1496

Jerusalem

Mental illness in Jerusalem (letters). Feinberg; Daghestani; reply of Rahav, Je 835– 837

Tews

Mental illness in Jerusalem (letters). Feinberg; Daghestani; reply of Rahav, Je 835–837

Jogging

Jogging and Tourette's disorder (letter). Jacome, Au 1100–1101

K

Kidney Function see Renal Function Kohut, Heinz

Heinz Kohut's self psychology: overview. Baker, Ja 1-9 (letter: Valgemae, Se 1252) Koro

Koro in American man (letter). Kendall, De 1621

L

Lactate see Sodium Lactate Lateralization, Cerebral

ECT-induced EEG asymmetry and therapeutic response in melancholia: relation to treatment electrode placement. Abrams, Mr 327–329

Right-hemisphere deficit syndrome in children (letters). Demb; Jerome, Je 830–831 Lawsuits see Forensic Psychiatry

Length of Stay

Conceptual and methodological issues in comparison of inpatient psychiatric facilities. Goodban, No 1437–1443

Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: preliminary report. Fulop, Jy 878–882

Long-term hospital treatment of borderline patients: descriptive outcome study. Tucker, No 1443–1448

Reduced length and cost of hospital stay for major depression in patients treated with ECT. Markowitz, Au 1025–1029

Lesbian Relationships

Longing for twinship and lesbianism (letter). Valgemae, Se 1252

Lethal Catatonia

Lethal catatonia and neuroleptic malignant syndrome (letter). Kalinowsky, reply of Mann, Au 1106–1107

Neuroleptic malignant syndrome and lethal catatonia (letter). Munoz, reply of Mann, Oc 1369–1370

Libido

Effect of bromocriptine on affect and libido in hyperprolactinemia. Koppelman, Au 1037–1041

Increased libido with trazodone (letter). Sullivan, Jy 967

Libido in women receiving trazodone (letters). Nakdimen; Jaffe; reply of Gartrell,

Lidocain

"Doom anxiety" and delirium in lidocaine toxicity. Saravay, Fe 159-163 (letters: Silber, Oc 1365; Mesulam, De 1623-1624)

Life Events

Life events, depressive symptoms, and immune function. Irwin, Ap 437–441

Stressful life events and psychiatric hospitalization of mentally retarded patients. Stack, My 661-663

Time and meaning of human experience (letter). Kubacki, reply of Schwartz, My 693–694 (letter: Bromberg, Oc 1364)

Lifespring

Effects of large group awareness training on participants' psychiatric status. Lieberman, Ap 460–464

Light Therapy

Eye versus skin phototherapy of seasonal affective disorder. Wehr, Je 753-757

Morning versus midday phototherapy of seasonal affective disorder. Jacobsen, Oc 1301–1305

Treatment of patient with seasonal premenstrual syndrome. Parry, Je 762-766

Limbic System

Lidocaine toxicity and limbic system (letter). Mesulam, reply of Saravay, De 1623-1624

Lithium

Absence of carbamazepine-induced hyponatremia among patients also given lithium. Vieweg, Jy 943-947

Clinical and chemical effects of lithium discontinuation (letter). Goodnick, Mr 385

Diagnosis and treatment of mixed mania. Secunda, Ja 96-98

Early identification of renal problems in patients receiving chronic lithium treatment. Samiy, My 670-672

Haloperidol as alternative to lithium in pregnant women (letter). van Gent, Se 1241

How long should drug therapy for depression be maintained? (letter). Abou-Saleh, Se 1247–1248

Identical twins' nonidentical responses to lithium (letter). Hoffmann, Se 1240– 1241

Lithium and extrapyramidal side effects of neuroleptics (letter). Weiden, reply of Goldney, Fe 264–265

Lithium-responsive depressed patients (letter). Mossman, reply of Rosenthal, Mr 392

Mania induced by lithium augmentation (letter). Price, Mr 389

Potentiation of antidepressants by T₃ and lithium (letter). Harrison, reply of Garbutt, Ap 530-531

Predictors of interepisode symptoms and relapse in affective disorder patients treated with lithium carbonate. Goodnick, Mr 367–369

Renal function and lithium (letter). Johnson, reply of DePaulo, Je 822-823

Weir Mitchell and lithium bromide (letter). Olfson, Au 1101–1102

Lorazepam

Lorazepam for psychogenic catatonia. Salam, Au 1082–1083

Treatment of catatonia with low-dose lorazepam. Greenfeld, Se 1224–1225

Treatment of premature ejaculation with lorazepam (letter). Segraves, Se 1240

LSD

Relief of obsessive-compulsive symptoms by LSD and psilocin (letter). Leonard, Se 1239–1240

M

Mania

Can antidepressants cause mania and worsen course of affective illness? Wehr, No 1403-1411

Diagnosis and treatment of mixed mania. Secunda, Ja 96–98

Identical twins' nonidentical responses to lithium (letter). Hoffmann, Se 1240–1241

Mania following head trauma. Shukla, Ja 93–96 (letter: Bell, Oc 1378–1379)

Mania induced by lithium augmentation (letter). Price, Mr 389

Mania precipitated by fluoxetine (letter). LeBegue, De 1620

Schizoaffective mania reconsidered. Levinson, Ap 415–425

Significance of past mania or hypomania in course and outcome of major depression. Coryell, Mr 309–315

Sleep reduction as final common pathway in genesis of mania. Wehr, Fe 201–204; correction, Ap 542 (letter: Gillin, Se 1248)

Manic-Depression see Affective Disorders MAO see Monoamine Oxidase

Marijuana

Carry-over effects of marijuana (letter). Morgan, reply of Yesavage, Fe 259–260 Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698–702 (letter: Milman, No 1515)

Marriage

Psychiatric problems of medical students and their spouses (letter). Myers, Ap 541–542

Sources of conflict in medical marriage. Gabbard, My 567-572

Massachusetts

Medicine court: Rogers in practice. Veliz, Ja 62–67

Medical Education see Education, Medical Medical Model

Effects of new economic climate on psychotherapeutic practice. Chodoff, Oc 1293–1297

Medicare

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial). Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610-615

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for design of prospective payment system.

•McGuire, My 616–620

Medication see Drugs, Psychotropic

Medicin

Model for ethical problem solving in medi-

cine, with practical applications. Hundert, Jy 839-846

Presidential address: psychiatry in medicine: medicine in psychiatry. Pasnau, Au 975–980

Response to presidential address: opportunities and challenges that confront medicine and its specialties, with special reference to psychiatry. Pollock, Au 980–985 Melancholia see Depression

Memory

Diazepam-induced amnesia: neuropharm-acological model of "organic amnestic syndrome." Wolkowitz, Ja 25–29

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573–577

Men

Childhood experiences of homeless men. Susser, De 1599–1601

Nocturnal penile tumescence in depressed men. Thase, Ja 89–92

Menstrual Cycle

Athletic amenorrhea, major affective disorders, and eating disorders. Gadpaille, Jy 939–942

Premenstrual exacerbation of binge eating in bulimia. Gladis, De 1592–1595

Therapeutic effect of sleep deprivation in patients with premenstrual syndrome. Parry, Je 808-810

Treatment of patient with seasonal premenstrual syndrome. Parry, Je 762–766

TSH and prolactin responses to TRH in patients with premenstrual syndrome. Roy-Byrne, Ap 480–484

Mental Health Lands

Alaska mental health lands. Schrader, Ja 107-109

Mental Health Services, Delivery of

Are we training too many psychiatrists? Yager, Au 1042–1048

Current need versus treatment history as predictors of use of outpatient psychiatric care. Friedman, Mr 355–357 (letter: Ramchandani, Oc 1371–1372)

Effects of new economic climate on psychotherapeutic practice. Chodoff, Oc 1293–1297

Estimated distribution of effort by providers of mental health services to US adults in 1982 and 1983. Knesper, Jy 883–888

Evolving subspecialization of psychiatry: implications for profession. Yager, No 1461–1465

For-profit psychiatric hospitals (letter).

Buck, reply of Eisenberg, Mr 395–396

Psychiatry and nursing home. Borson, No 1412–1418

Retrospective study of adolescents' visits to general hospital psychiatric emergency service. Hillard, Ap 432–436

Use of outpatient mental health services over time in health maintenance organization and fee-for-service plans. Manning, Mr 283–287

Which Mexican-Americans underutilize health services? Wells, Jy 918–922

Mental Illness see Psychopathology Mental Retardation

Adrenocortical function and depressive illness in mentally retarded patients. Ruedrich, My 597–602

Stressful life events and psychiatric hospitalization of mentally retarded patients. Stack, My 661–663

Meperidine

Meperidine-induced delirium. Eisendrath, Au 1062–1065

Methadone

Fear of methadone maintenance (letter). Newman, reply of Milby, Mr 394–395

Inadequate plasma concentrations in some high-dose methadone maintenance patients. Tennant, Oc 1349–1350

Methodology

Control groups for psychosocial intervention outcome studies. Strayhorn, Mr 275–282

Methylphenidate

Dysphoria associated with methylphenidate infusion in borderline personality disorder. Lucas, De 1577–1579

Metoclopramide

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Mexican-Americans

Which Mexican-Americans underutilize health services? Wells, Jy 918--922

Minimal Brain Dysfunction see Attention Deficit Disorder

Mitchell, Weir

Weir Mitchell and lithium bromide (letter). Olfson, Au 1101–1102

Mitral Valve Prolapse

Mitral valve prolapse and thyroid abnormalities in patients with panic attacks. Matuzas, Ap 493–496

MMPI

Scale for measuring patients' ability to cope (letter). French, Mr 389

Monoamine Oxidase

Platelet MAO activity in geriatric patients with depression and dementia. Alexopoulos, No 1480–1483

Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Georgotas, Mr 338–340

Mood see also Affective Disorders

Bipolar mood disorder and endometriosis: preliminary findings. Lewis, De 1588– 1591

Controllable and uncontrollable stress in humans: alterations in mood and neuro-endocrine and psychophysiological function. Breier, No 1419–1425

DST and TRH stimulation test in mood disorder subtypes. Levy, Ap 472-475

Poststroke mood disorders (letter). Van Sweden B, reply of Robinson, Oc 1372–1374

Mortality

Mortality in neuroleptic malignant syndrome (letter). Jee, Ap 531

Psychiatric and medical diagnoses as risk factors for mortality in psychiatric patients: case-control study. Winokur, Fe 208-211

Mothers

Maternal affective disorders, illness, and stress: risk for children's psychopathology. Hammen, Je 736–741

New female perceptions of parental power. McDermott, Au 1086–1087

Psychiatric illness in mothers of anxious

children. Last, De 1580-1583

Movies

Theory and practice of movie psychiatry. Schneider, Au 996–1002

Multiple Personality

Experiential sampling in study of multiple personality disorder. Loewenstein, Ja 19–24

First-rank symptoms as diagnostic clue to multiple personality disorder. Kluft, Mr 293–298 (letter: Fox, Oc 1377–1378)

More on multiple personality disorder (letters). French; Chodoff; reply of Kluft, Ja 123-125

Rape and multiple personality disorder (letter). Ament, Ap 541

Murder see Homicide

Mutism

Differential diagnosis of mute patients (letter). David, reply of Altshuler, Au 1113

N

Nalmefene

Failure of nalmefene and estrogen to improve memory in Alzheimer's disease (letter). Weiss, Mr 386–387

Naltrexone

Interaction between thioridazine and naltrexone (letter). Maany, Jy 966

Naltrexone treatment for postconcussional syndrome. Tennant, Je 813–814

Narcissism

More on *The Ego Ideal* (letter). Morrison, Ap 528

Native Americans

Current status and future directions of research on American Indian child. Yates, Se 1135–1142

Natural Killer Cells

Natural killer cell activity in major depression (letter). Mohl, De 1619

Neuroendocrine Function

Alterations in immunocompetence during stress, bereavement, and depression: focus on neuroendocrine regulation. Calabrese, Se 1123–1134

Controllable and uncontrollable stress in humans: alterations in mood and neuro-endocrine and psychophysiological function. Breier, No 1419–1425

Neuroleptic Malignant Syndrome

Amoxapine and neuroleptic malignant syndrome (letter). Lesaca, No 1514

Diagnosing and defining neuroleptic malignant syndrome (letter). Adityanjee, reply of Addonizio, Oc 1370–1371

Frequency and presentation of neuroleptic malignant syndrome: prospective study. Keck, Oc 1344–1346

Lethal catatonia and neuroleptic malignant syndrome (letter). Kalinowsky, reply of Mann, Au 1106–1107

Mortality in neuroleptic malignant syndrome (letter). Jee, Ap 531

Neuroleptic malignant syndrome (letters). Friedman; Blum, Je 831

Neuroleptic malignant syndrome and lethal catatonia (letter). Munoz, reply of Mann, Oc 1369–1370

Neuroleptic malignant syndrome: facts

and controversies (letter). Adityanjee, reply of Sternberg, Au 1104–1105

Prevalence of neuroleptic malignant syndrome (letter). O'Brien, Oc 1371

Symptoms of neuroleptic malignant syndrome (letter). Friedman, reply of Addonizio, Au 1105–1106

Neuroleptics see also Drug Side Effects— Neuroleptics; Neuroleptic Malignant Syndrome; specific drugs

Absence of acquired tolerance to neuroleptics in schizophrenic patients. Palmstierna, Au 1084–1085

Depot neuroleptics for acutely psychotic patients (letter). Turns, Au 1099

Dystonia, neuroleptic dose, and anticholinergic drugs (letter). McEvoy, reply of Winslow, Mr 393–394

Neuroleptic responsivity of negative and positive symptoms in schizophrenia. Breier, De 1549–1555

Neuroleptics, prolactin, and osteoporosis (letter). Rogers, Mr 388-389

Neurological Dysfunction see Brain Disorders

Neuroscience

Future of psychiatry. Detre, My 621-625 Neuroscience and psychiatry (letter). George, Au 1103

Systems and structure of meaning (letter). Rifkin, reply of Schwartz, Jy 971–972

Time and meaning of human experience (letter). Kubacki, reply of Schwartz, My 693–694 (letter: Bromberg, Oc 1364)

Nicotine

Nicotine and panic attacks (letter). Dilsaver, Se 1245–1246

Nicotine and panic attacks (letter). Maany, reply of Hughes, Fe 255

Prevalence of tobacco dependence and withdrawal. Hughes, Fe 205-208

Nomenclature see Diagnosis and Classifica-

Norepinephrine

Neurobiological mechanisms of panic anxiety: biochemical and behavioral correlates of yohimbine-induced panic attacks. Charney, Au 1030–1036

Nortriptyline

Electrocardiographic effects of nortriptyline, phenelzine, and placebo under optimal treatment conditions. Georgotas, Je 798–801

Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Georgotas, Mr 338–340

Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. True, Se 1220–1221; correction, No 1521

Nosology see Diagnosis and Classification Nursing Homes

Psychiatry and nursing home. Borson, No 1412-1418

0

Obesity

Complications of surgical treatment of obesity (letter). Ernsberger, reply of Stunkard, Je 833-834

Genetic contributions to human fatness: adoption study. Price, Au 1003-1008

Obsessive-Compulsive Disorder

Bowel obsessions responsive to tricyclic antidepressants in four patients. Jenike, Oc 1347–1348

Clinical comparison of Tourette's disorder and obsessive-compulsive disorder. Pitman, Se 1166–1171

Clonidine and clomipramine in obsessivecompulsive disorder (letter). Lipsedge, Jy 965–966

Eating Attitudes Test scores of patients with obsessive-compulsive disorder (letter). Joffe, No 1510–1511

Fluvoxamine treatment of obsessive-compulsive disorder. Perse, De 1543–1548

Obsessive-compulsive disorder and borderline personality disorder (letter). Hermesh, reply of Rasmussen, Ja 120–122

Obsessive-compulsive disorder and psychosis (letter). Sandifer, reply of Insel, Jy

Obsessive-compulsive symptoms in panic disorder, Mellman, De 1573-1576

Psychosis in obsessive-compulsive disorder (letter). Chopra, Oc 1363–1364

Relief of obsessive-compulsive symptoms by LSD and psilocin (letter). Leonard, Se 1239-1240

Treatment of severe obsessive-compulsive disorder with fluvoxamine. Price, Au 1059-1061

Trimipramine in treatment of obsessivecompulsive disorder (letter). Bartucci, Jy 964–965

Use of portable-computer program in behavioral treatment of obsessive-compulsive disorder (letter). Baer, Au 1101

Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Andrews, Oc 1331–1334

Opiates

Antipsychotic effect of buprenorphine in schizophrenia. Schmauss, Oc 1340–1342 Propranolol as adjunct to clonidine in opi-

ate detoxification (letter). Roehrich, Au 1099–1100

Twelve-month follow-up of psychotherapy for opiate dependence. Woody, My 590-596

Orgasmic Dysfunction see Sexual Disorders Osteoporosis

Neuroleptics, prolactin, and osteoporosis (letter). Rogers, Mr 388–389

Outcome

Characteristics of very poor outcome schizophrenia. Keefe, Jy 889–895

Comparative trial of pharmacologic strategies in schizophrenia. Carpenter, No 1466–1470

Complications of surgical treatment of obesity (letter). Ernsberger, reply of Stunkard, Je 833-834

Control groups for psychosocial intervention outcome studies. Strayhorn, Mr 275-282

Discharged psychiatric patient: review of social, social-psychological, and psychiatric correlates of outcome. Avison, Ja 10–18

Expectations and outcomes for patients given mental health care or spiritist healing in Puerto Rico. Koss, Ja 56-61

Follow-up of pathological gamblers after treatment. Taber, Je 757–761

Long-term hospital treatment of borderline patients: descriptive outcome study. Tucker, No 1443-1448

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783–784

Prognostic relevance of delusions in depression: follow-up study. Kettering, Se 1154–1160

Prognostic validity of DSM-III axis IV in depressed inpatients. Zimmerman, Ja 102–106

Prognostic validity of dexamethasone suppression test: results of six-month prospective follow-up. Zimmerman, Fe 212-214

Significance of past mania or hypomania in course and outcome of major depression. Coryell, Mr 309–315

Sustained remission in drug-free schizophrenic patients. Fenton, Oc 1306–1309 Twelve-month follow-up of psychotherapy for opiate dependence. Woody, My 590–

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years

study sample, and overall status 32 years later. Harding, Je 718–726 Vermont longitudinal study of persons with

severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727–735

Outpatients

Coerced outpatient treatment (letter). Mossman, reply of Geller, Jy 968-969

Current need versus treatment history as predictors of use of outpatient psychiatric care. Friedman, Mr 355-357 (letter: Ramchandani, Oc 1371-1372)

Mandatory outpatient treatment (letter).

Bursten, reply of Appelbaum, Mr 389-

Outpatient civil commitment (letter). Leong; replies of Bursten, Geller, My 694-696

Use of outpatient mental health services over time in health maintenance organization and fee-for-service plans. Manning, Mr 283-287

Oxotremorine

Induction of depression with oxotremorine in patients with Alzheimer's disease. Davis, Ap 468-471

p

Pain

Chronic pain and posttraumatic stress disorder (letter). Rapaport, Ja 120

Behavioral aspects of panic disorder. Marks, Se 1160-1165

Carbamazepine, alprazolam withdrawal, and panic disorder (letter). Lawlor, reply of Klein, Fe 265-266

Cardiac rate and rhythm in panic patients.
Shear, My 633-637

Clinical characteristics and response to sodium lactate of patients with infrequent panic attacks. Cowley, Je 795-798 CO₂ challenge of patients with panic disorder. Fyer, Au 1080-1082

Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Reich, Mr 323–326 (letter: Maddock, De 1625–1626)

Discontinuation of alprazolam treatment in panic patients. Fyer, Mr 303-308

Effect of pregnancy on panic attacks. George, Au 1078–1079

Emergence of depressive symptoms in patients receiving alprazolam for panic disorder. Lydiard, My 664-665

Family study of generalized anxiety disorder. Noyes, Au 1019-1024

Globus hystericus and panic attacks (letter). Liebowitz, reply of Jenike, Mr 390–391

Hemoglobin and erythrocyte indices in panic disorder (letter). Balon, Ap 539– 540

Hypothalamic-pituitary-adrenal system in panic disorder. Goldstein, Oc 1320–1323

Idiopathic cardiomyopathy and panic disorder: clinical association in cardiac transplant candidates. Kahn, Oc 1327–1330

Laboratory procedure for induction of flashbacks. Rainey, Oc 1317-1319

Mitral valve prolapse and thyroid abnormalities in patients with panic attacks. Matuzas, Ap 493–496

More on cocaine and panic disorder (letter). Pohl, Oc 1363

Naturalistic study of imipramine in panic disorder and agoraphobia. Aronson, Au 1014–1019

Neurobiological mechanisms of panic anxiety: biochemical and behavioral correlates of yohimbine-induced panic attacks. Charney, Au 1030–1036

Nicotine and panic attacks (letter). Dilsaver, Se 1245–1246

Nicotine and panic attacks (letter). Maany, reply of Hughes, Fe 255

Obsessive-compulsive symptoms in panic disorder. Mellman, De 1573–1576

Panic disorder in prepubertal children (letter). Vitiello, Ap 525-526

Panic disorder precipitated by exposure to organic solvents in work place. Dager, Au 1056–1058

Patients with panic attacks and abnormal EEG results. Edlund, Ap 508–509 (letter: Van Swaden De 1624, 1625)

Van Sweden, De 1624–1625)
Phencyclidine and "crack"-precipitated panic disorder (letter). Price, My 686–

Reduction of CO₂-induced anxiety in patients with panic attacks after repeated CO₂ exposure. van den Hout, Je 788–791

Schizophrenia, panic anxiety, and alprazolam (letter). Kahn, Ap 527-528

State and personality in depressed and panic patients. Reich, Fe 181-187

Three patients with concomitant panic attacks and seizure disorder: possible clues to neurology of anxiety. Weilburg, Au 1053-1056

Trazodone in treatment of panic disorder and agoraphobia with panic attacks. Mavissakalian, Je 785-787 Treatment of patient with airplane phobia (letter). Forrest, Ap 526–527

Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Andrews, Oc 1331–1334

Paranoia

Ethological study of facial behavior in nonparanoid and paranoid schizophrenic patients. Pitman, Ja 99–102

Folie à famille: shared paranoid disorder in Vietnam veteran and his family Glassman, My 658-660

Patient incompetence in lega' settings (letter). Goldstein, reply of Gutheil, Fe

Soviet View of paranoid disorder (letter). Solyom, reply of Swanson, Ap 531–532 Parents

New female perceptions of parental power. McDermott, Au 1086–1087

Parkinsonian Symptoms see Extrapyramidal Side Effects

Patients

Male and female psychiatrists and their patients. Fenton, Mr 358-361

More on psychiatrist-patient sexual contact (letters). DeRosis; Carson, My 688-689

Psychiatrist-patient sexual contect (letter). Levenson, reply of Gartrell, Ap 529-530

Psychiatrist-patient sexual contact: results of national survey, II: psychiatrists' attitudes. Herman, Fe 164-169 (letter: Kavoussi, Se 1249-1250)

PCP see Phencyclidine

Personality

State and personality in depressed and panic patients. Reich, Fe 181-187

Personality Disorders see also specific disorders

Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767-771

Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Reich, Mr 323–326 (letter: Maddock, De 1625–1626)

Long-term hospital treatment of borderline patients: descriptive outcome study. Tucker, No 1443–1448

Sex distribution of *DSM-III* personality disorders in psychiatric outpatients. Reich, Ap 485–488

Systematic approach to delineation of personality disorders. Livesley, Je 772-777
PET see Positron Emission Tomography

Pharmacotherapy see Drugs, Psychotropic Phencyclidine

Augmentation of haloperidol by ascorbic acid in phencyclidine intoxication. Giannini, Se 1207–1209

Phencyclidine and "crack"-precipitated panic disorder (letter). Price, My 686– 687

Phenelzine

Anorgasmia caused by MAOI (letter). Jacobson, Ap 527

Effect of pharmacotherapy on psychoanalytic process: case report of modified analysis. Wylie, Ap 489–492

Electrocardiographic effects of nortripty line, phenelzine, and placebo under optimal treatment conditions. Georgotas, Je 798–801

Possible toxic interaction between cyproheptadine and phenelzine (letter). Kahn, Se 1242–1243

Potentiation of propoxyphene by phenelzine (letter). Garbutt, Fe 251–252

Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Georgotas, Mr 338–340

Spontaneous remission of MAOI-induced anorgasmia. Nurnberg, Je 805–807

D-Phenylalanine

Treatment of hyperactive children with pphenylalanine. Zametkin, Je 792–794

Phenylpropanolamine

Sympathomimetic-induced depression (letter). Twerski, Fe 252 (letter: Climko, Oc 1376–1377)

Phobias

Bowel obsessions responsive to tricyclic antidepressants in four patients. Jenike, Oc 1347–1348

Dependent personality disorder associated with phobic avoidance in patients with panic disorder. Reich, Mr 323–326 (letter: Maddock, De 1625–1626)

Separation anxiety and school phobia: comparison using DSM-III criteria. Last, My 653-657

Treatment of patient with airplane phobia (letter). Forrest, Ap 526-527

Phototherapy see Light Therapy

Physical Illness and Impairment see also specific disorders

Depression in Chinese medical inpatients. Yang, Fe 226–228

Idiopathic cardiomyopathy and panic disorder: clinical association in cardiac transplant candidates. Kahn, Oc 1327–1330

Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: preliminary report. Fulop, Jy 878-882

Overdiagnosis of depression in the medically ill (letter). Perry, reply of Rodin, Ja 125-126

Psychiatric and medical diagnoses as risk factors for mortality in psychiatric patients: case-control study. Winokur, Fe 208-211

Relationship between physical anomalies and age at onset of schizophrenia. Green, My 666–667

Use of DSM-III axis III in recording physical illness in psychiatric patients. Maricle, No 1484-1486

Physicians

Changes in AIDS risk behaviors among homosexual male physicians and university students. Klein, Je 742–747

Homophobia among physicians and nurses treating AIDS patients (letter). Kalman, No 1514–1515

Model for ethical problem solving in medicine, with practical applications. Hundert, Jy 839–846

Sources of conflict in medical marriage. Gabbard, My 567-572

Phytohemagglutinin

Cortisol and dexamethasone blood levels and phytohemagglutinin response (letter). Ganguli, Ap 524

Pimozide

ECG changes during haloperidol and pimozide treatment of Tourette's disorder. Fulop, My 673–675

Pindolol

Neuroleptic-induced akathisia treated with pindolol (letter). Reiter, Mr 383–384

Pindolol and propranolol in neurolepticinduced akathisia (letter). Adler, Se 1241-1242

Pisa Syndrome

Pisa syndrome, or pleurothotonus (letter). Pilette, reply of Guy, Jy 969-970

Platelet Membrane Fluidity

Platelet membrane fluidity in Alzheimer's disease and major depression. Zubenko, Jy 860–868

Pleurothotonus

Pisa syndrome, or pleurothotonus (letter). Pilette, reply of Guy, Jy 969–970

Polypharmacy see Combined Drug Therapy Position Statements

Position statement on AIDS (off acts). American Psychiatric Association, Au 1122

Position statement on HIV-related discrimination (off acts). American Psychiatric Association, Au 1122

Position statement on psychoactive substance use and dependence: update on marijuana and cocaine (off acts). American Psychiatric Association, My 698–702 (letter: Milman, No 1515)

Positron Emission Tomography

Hypofrontality in schizophrenia as assessed by PET (letter). Buchsbaum, reply of Kling, Ja 122–123

Phenomenological correlates of metabolic activity in 18 patients with chronic schizophrenia. Volkow, Fe 151–158 (letters: Meltzer; Kay, Oc 1366–1368)

Single photon emission tomographic brain images in dementia of the Alzheimer type (letter). Hendrie, Mr 387–388

Postconcussional Syndrome

Naltrexone treatment for postconcussional syndrome. Tennant, Je 813–814

Posttraumatic Stress Disorder see also Stress

Altered platelet α_2 -adrenergic binding sites in posttraumatic stress disorder (letter). Perry, No 1511–1512

Auditory hallucinations in combat-related chronic posttraumatic stress disorder. Mueser, Mr 299–302

Chronic pain and posttraumatic stress disorder (letter). Rapaport, Ja 120

Chronic posttraumatic stress disorder (letter). Burstein, Je 827

Cyclic AMP signal transduction in posttraumatic stress disorder. Lerer, Oc 1324-1327

DST and posttraumatic stress disorder. Kudler, Au 1068–1071

Field trial of DSM-III-R psychoactive substance dependence disorders. Rounsaville, Mr 351–355

Laboratory procedure for induction of flashbacks. Rainey, Oc 1317-1319

More on posttraumatic stress disorder (letters). Kadushin (letter: Laufer, Je 822); Pepper, Fe 253–254

Neuropsychological hypothesis explaining

posttraumatic stress disorders. Kolb, Au 989-995

Posttraumatic stress disorder among frontline soldiers with combat stress reaction: 1982 Israeli experience. Solomon, Ap 448–454

Posttraumatic stress disorder: etiologic specificity of wartime stressors. Breslau, My 578-583

Posttraumatic stress disorder in Japanese prisoners of war (letter). Burges Watson, reply of Tennant, Au 1110-1111

Reactivation of combat-related posttraumatic stress disorder. Solomon, Ja 51–55 Survivors of imprisonment in Pacific theater during World War II. Goldstein, Se 1210–1213

Prediction

Clinical predictors of suicide in patients with major affective disorders: controlled prospective study. Fawcett, Ja 35–40

Current need versus treatment history as predictors of use of outpatient psychiatric care. Friedman, Mr 355-357 (letter: Ramchandani, Oc 1371-1372)

L-Dopa challenge and relapse in schizophrenia. Davidson, Jy 934–938

Expressed emotion (letter). Stitelman, reply of Koenigsberg, Au 1111–1112

Field test of Motto's Risk Estimator for Suicide. Clark, Jy 923–926

Prediction of response to nortriptyline and phenelzine by platelet MAO activity. Georgotas, Mr 338–340

Predictive validity of judgments of dangerousness in emergency civil commitment. McNiel, Fe 197–200

Predictors of interepisode symptoms and relapse in affective disorder patients treated with lithium carbonate. Goodnick, Mr 367–369

Prognostic validity of dexamethasone suppression test: results of six-month prospective follow-up. Zimmerman, Fe 212– 214

Prognostic validity of DSM-III axis IV in depressed inpatients. Zimmerman, Ja 102-106

Scale for measuring patients' ability to cope (letter). French, Mr 389

Significance of past mania or hypomania in course and outcome of major depression. Coryell, Mr 309–315

Some physiologic antecedents of adult mental health. Phillips, Au 1009–1013

Suicide and homicide in United States: epidemiologic study of violent death, population changes, and potential for prediction. Holinger, Fe 215–219

Sustained remission in drug-free schizophrenic patients. Fenton, Oc 1306-1309 Pregnancy

Effect of pregnancy on panic attacks. George, Au 1078–1079

Haloperidol as alternative to lithium in pregnant women (letter). van Gent, Se 1741

Pregnancy-related affective episodes among women with recurrent depression. Frank, Mr 288–293

Premenstrual Syndrome

Therapeutic effect of sleep deprivation in patients with premenstrual syndrome.

Parry, Je 808-810

Treatment of patient with seasonal premenstrual syndrome. Parry, Je 762-766

TSH and prolactin responses to TRH in patients with premenstrual syndrome. Roy-Byrne, Ap 480–484

Priapism

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Priapism treated with benztropine (letter). Greenberg, Mr 384–385

Prisoners

Survivors of imprisonment in Pacific theater during World War II. Goldstein, Se 1210–1213

Privacy

Elements of private therapeutic interview. Zinberg, De 1527–1533

Profits

For-profit psychiatric hospitals (letter). Buck, reply of Eisenberg, Mr 395-396 Prolactin

Abnormal prolactin response to haloperidol challenge in men with schizophrenia. Keks, Oc 1335–1337

Effect of bromocriptine on affect and libido in hyperprolactinemia. Koppelman, Au 1037–1041

Multiple hormonal responses to insulininduced hypoglycemia in depressed patients and normal volunteers. Amsterdam, Fe 170–175

Neuroleptics, prolactin, and osteoporosis (letter). Rogers, Mr 388-389

Serum prolactin levels in sons of alcoholics and control subjects. Schuckit, Jy 854– 859

TSH and prolactin responses to TRH in patients with premenstrual syndrome. Roy-Byrne, Ap 480–484

Proportion of Variance Explained

Reporting the proportions of variance explained (PVE) (letter). Thyer, My 690 Propoxyphene

Potentiation of propoxyphene by phenelzine (letter). Garbutt, Fe 251–252

Propranolol

β-Adrenergic blockers for aggressive behavior in schizophrenia (letters). Whitman; Pugh; reply of Sorgi, Ap 538–539

Comparison of propranolol, sotalol, and betaxolol in treatment of neuroleptic-induced akathisia. Dupuis, Je 802-805

duced akathisia. Dupuis, Je 802-805 Pindolol and propranolol in neurolepticinduced akathisia (letter). Adler, Se 1241-1242

Propranolol as adjunct to clonidine in opiate detoxification (letter). Roehrich, Au 1099–1100

Prospective Payment System

Analysis of DRG-based reimbursement for psychiatric admissions to general hospitals. Freiman, My 603-609

Are specialized psychiatric services worth higher cost? (editorial). Goldman, My 626-628

Bringing psychiatric patients into Medicare prospective payment system: alternatives to DRGs. Mitchell, My 610–615

Differences in resource use and cost among facilities treating alcohol, drug abuse, and mental disorders: implications for

design of prospective payment system. McGuire, My 616-620

Prostaglandins

Clinical correlates of platelet prostaglandin receptor subsensitivity in schizophrenia. Kanof, De 1556–1560

Pseudologia Fantastica

Pseudologia fantastica (letter). King, reply of Snyder, Jy 970–971

Psilocin

Relief of obsessive-compulsive symptoms by LSD and psilocin (letter). Leonard, Se 1239–1240

Psychiatrists

Clinician-researchers in psychiatry (letters). Meador-Woodruff; Malenka; reply of Burke, Ap 535

Estimated distribution of effort by providers of mental health services to US adults in 1982 and 1983. Knesper, Jy 883–888 Male and female psychiatrists and their

patients. Fenton, Mr 358-361
More on psychiatrist-patient sexual contact
(letters). DeRosis; Carson, My 688-689
New American Board of Medical Special-

New American Board of Medical Specialties publications (letter). Langsley, Mr 383

Psychiatrist-patient sexual contact (letter). Levenson, reply of Gartrell, Ap 529–530 Psychiatrist-patient sexual contact: results of national survey, II: psychiatrists' attitudes. Herman, Fe 164–169 (letter: Kavoussi, Se 1249–1250)

Psychiatrists' income (letter). Thompson, reply of Astrachan, Mr 391

Theory and practice of movie psychiatry. Schneider, Au 996–1002

Psychiatry

Evolving subspecialization of psychiatry: implications for profession. Yager, No 1461–1465

Future of psychiatry. Detre, My 621–625 Neuroscience and psychiatry (letter). George, Au 1103

Presidential address: psychiatry in medicine: medicine in psychiatry. Pasnau, Au 975-980

Response to presidential address: opportunities and challenges that confront medicine and its specialties, with special reference to psychiatry. Pollock, Au 980–985

Theory and practice of movie psychiatry. Schneider, Au 996–1002

Psychoanalysis

Clinical implications of adult developmental theory. Colarusso, Oc 1263–1270

Comment on review of *The Foundations of Psychoanalysis* (letter). Gorman, reply of Laor, Fe 256–257

Effect of pharmacotherapy on psychoanalytic process: case report of modified analysis. Wylie, Ap 489–492

Heinz Kohut's self psychology: overview. Baker, Ja 1–9 (letter: Valgemae, Se 1252) Psychobiology

Controllable and uncontrollable stress in humans: alterations in mood and neuro-endocrine and psychophysiological function. Breier, No 1419–1425

Psychodynamics

Comments on review of brief psychotherapies (letters). Alpert; Hollender; Castelnuovo-Tedesco; Slaby; Harris; Riskin; reply of Ursano, No 1515-1518

Heinz Kohut's self psychology: overview. Baker, Ja 1–9 (letter: Valgemae, Se 1252)

Levels of emotional awareness: cognitivedevelopmental theory and its application to psychopathology. Lane, Fe 133–143; correction, Ap 542

Psychodynamic formulation: its purpose, structure, and clinical application. Perry,

My 543-550

Psychological Tests see Tests, Psychological Psychopathology see also specific diagnoses Childhood sexual and physical abuse as factors in adult psychiatric illness. Bryer, No 1426–1430

Controlled study of lifetime prevalence of affective and other psychiatric disorders in bulimic outpatients. Hudson, Oc 1283–1287

Creativity and mental illness: prevalence rates in writers and their first-degree relatives. Andreasen, Oc 1288–1292

Heinz Kohut's self psychology: overview. Baker, Ja 1–9 (letter: Valgemae, Se 1252)

Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: preliminary report. Fulop, Jy 878–882

Levels of emotional awareness: cognitivedevelopmental theory and its application to psychopathology. Lane, Fe 133–143; correction, Ap 542

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783–784

Maternal affective disorders, i'lness, and stress: risk for children's psychopathology. Hammen, Je 736-741

Mental Illness Awareness Week (editorial). Fink, Oc 1298–1300

Mental health effects of Three Mile Island nuclear reactor restart. Dew, Au 1074– 1077

Mental illness in Jerusalem (letters). Feinberg; Daghestani; reply of Rahav, Je 835–837

Psychiatric aspects of AIDS. Faulstich, My 551–556

Psychiatric disorders in community sample of adolescents. Kashani, My 584–589; correction, Au 1114

Psychiatric problems of medical students and their spouses (letter). Myers, Ap 541-542

Psychodynamic formulation: its purpose, structure, and clinical application. Perry, My 543–550

Psychological and interpersonal issues in space. Kanas, Je 703–709

Stress and psychiatric training (letter). Auster, Je 829

Psychopharmacology see Drugs, Psychotropic

Psychosis

AIDS-related complex presenting as psychosis (letter). Halevie-Goldman, Jy 964 Extreme haircutting and psychosis (letter). Strawn, Au 1102–1103

Koro in American man (letter). Kendall, De 1621

Neurological aspects of schizophrenia-like psychosis (letter). Aird, Oc 1362–1363

Obsessive-compulsive disorder and psychosis (letter). Sandifer, reply of Insel, Jy 969 Psychosis in obsessive-compulsive disorder (letter). Chopra, Oc 1363-1364

Psychotic reaction to insect repellent (letter). Poe, Au 1103-1104

Reports of childhood incest and current behavior of chronically hospitalized psychotic women. Beck, No 1474-1476

Thiamine deficiency and psychosis (letter). Bakhai, My 687-688

Understanding meaning of symptom (letter). Eppright, De 1620-1621

Psychosocial Studies

Control groups for psychosocial intervention outcome studies. Strayhorn, Mr 275–282

Psychotherapy

Clinical implications of adult developmental theory. Colarusso, Oc 1263-1270

Comments on review of brief psychotherapies (letters). Alpert; Hollender; Castelnuovo-Tedesco; Slaby; Harris; Riskin; reply of Ursano, No 1515-1518

Effects of new economic climate on psychotherapeutic practice. Chodoff, Oc 1293-1297

Elements of private therapeutic interview. Zinberg, De 1527–1533

Heinz Kohut's self psychology: overview. Baker, Ja 1-9 (letter: Valgemae, Se 1252) Initial contract in treatment of borderline patients. Selzer, Jy 927-930

Intensive psychodynamic therapy with borderline patients: overview. Waldinger, Mr 267–274 (letter: Grolnick, Oc 1365– 1366)

Patient attrition in dynamically oriented treatment groups. Roback, Ap 426–431

Psychodynamic formulation: its purpose, structure, and clinical application. Perry, My 543-550

Twelve-month follow-up of psychotherapy for opiate dependence. Woody, My 590-596

Public Opinion

Mental Illness Awareness Week (editorial). Fink, Oc 1298-1300

Public Policy

Mental Illness Awareness Week (editorial). Fink, Oc 1298–1300

Puerto Ricans

Expectations and outcomes for patients given mental health care or spiritist healing in Puerto Rico. Koss, Ja 56-61

R

Rape and multiple personality disorder (letter). Ament, Ap 541

Seasonal change in aggressivity (letter). Ronat, reply of Michael, Je 824-825

Rating Scales see Tests, Psychological Reaction Time

Difference in reaction time between subjects with schizotypal and borderline personality disorders. Chapin, Jy 948-950

Relapse

1111

L-Dopa challenge and relapse in schizophrenia. Davidson, Jy 934-938

Expressed emotion (letter). Stitelman, reply of Koenigsberg, Au 1111-1112

How long should drug therapy for depression be maintained? (letter). Abou-Saleh, Se 1247-1248

Predictors of interepisode symptoms and relapse in affective disorder patients treated with lithium carbonate. Goodnick, Mr 367-369

Relapse in recurrent unipolar depression. Kupfer, Ja 86-88

Sustained remission in drug-free schizophrenic patients. Fenton, Oc 1306-1309

Relatives see Genetics Religion

Expectations and outcomes for patients given mental health care or spiritist healing in Puerto Rico. Koss, Ja 56-61

REM Sleep see Sleep Renal Function

Early identification of renal problems in patients receiving chronic lithium treatment. Samiy, My 670-672

Renal function and lithium (letter). Johnson, reply of DePaulo, Je 822-823

Research

Alcohol use in volunteers 1 year after study requiring alcohol intake (letter). Willenbring, le 825

Clinician-researchers in psychiatry (letters). Meador-Woodruff; Malenka; reply of Burke, Ap 535

Control groups for psychosocial intervention outcome studies. Strayhorn, Mr 275-282

Keeping clinician-researcher alive (letter). Sarasua, reply of Burke, Fe 262-263

Mental Illness Awareness Week (editorial). Fink, Oc 1298-1300

Neuroscience and psychiatry George, Au 1103

Research diagnostic problems (letter). Rapaport, Je 826-827

Use of animals in research (letter). Wise, reply of Pincus, Au 1111

Research Diagnostic Criteria

Progress in classification of functional psychoses. Coryell, No 1471-1474

Residents

Applicants' choice of residency training program. Sledge, Ap 501-503

Shifts in attitudes among psychiatric residents: serial measures over 10 years. Coryell, Jy 913-917

Right to Refuse Treatment

Coerced outpatient treatment (letter). Mossman, reply of Geller, Jy 968-969

Effects of Jamison-Farabee consent decree: due process protection for involuntary psychiatric patients treated with psychoactive medication. Hargreaves, Fe 188-192

Mandatory outpatient treatment (letter). Bursten, reply of Appelbaum, Mr 389-

Medicine court: Rogers in practice. Veliz, Ja 62-67

Outpatient civil commitment (letter). Leong; replies of Bursten, Geller, My 694-696

Voluntary and involuntary patients (letter). Geller, reply of Okin, Au 1112-1113

Field test of Motto's Risk Estimator for Suicide. Clark, Jy 923-926

Relationship between Russian roulette deaths and risk-taking behavior: controlled study. Fishbain, My 563-567 (letter: Grosz, No 1519)

Rogers v Commissioner

Medicine court: Rogers in practice. Veliz, Ja 62-67

Russian Roulette

Relationship between Russian roulette deaths and risk-taking behavior: controlled study. Fishbain, My 563-567 (letter: Grosz, No 1519)

Schizoaffective Disorder

Co-occurrence of schizophrenia and affective disorders (letter). Layne, reply of Kendler, Ap 533

Schizoaffective mania reconsidered. Levinson, Ap 415-425

Schizoid Personality Disorder

Covariation of criteria sets for avoidant, schizoid, and dependent personality disorders. Trull, Je 767-771

Schizophrenia, Diagnosis of

Schizoaffective mania reconsidered. Levinson, Ap 415-425

Schizophrenia, Research in

Abnormal prolactin response to haloperidol challenge in men with schizophrenia. Keks, Oc 1335-1337

Absence of acquired tolerance to neuroleptics in schizophrenic patients. Palmstierna, Au 1084-1085

ACTH response to corticotropin-releasing hormone (letter). Fava, Au 1102

Auditory hallucinations and subvocal speech in schizophrenic patients. Bick, Fe 222-225 (letter: Evenson, Oc 1364-1365)

Cerebellar atrophy in schizophrenia and affective disorder. Yates, Ap 465-467

Characteristics of very poor outcome schizophrenia. Keefe, Jy 889–895 Clinical correlates of platelet prostaglandin

receptor subsensitivity in schizophrenia. Kanof, De 1556-1560

Co-occurrence of schizophrenia and affective disorders (letter). Layne, reply of Kendler, Ap 533

CSF corticotropin-releasing factor-like immunoreactivity in depression and schizophrenia. Banki, Jy 873-877

L-Dopa challenge and relapse in schizophrenia. Davidson, Jy 934-938

Ethological study of facial behavior in nonparanoid and paranoid schizophrenic patients. Pitman, Ja 99-102 Expressed emotion (letter). Stitelman, reply

of Koenigsberg, Au 1111-1112

Familial schizophrenia and treatment response. Silverman, Oc 1271-1276

Hypofrontality in schizophrenia as assessed by PET (letter). Buchsbaum, reply of Kling, Ja 122-123

Increased ventricle-to-brain ratio in lateonset schizophrenia. Rabins, Se 1216-

International perspective on assessment of negative and positive symptoms in schizophrenia. Moscarelli, De 1595-1598

Lateral ventricular size and social network differentiation in young, nonchronic schizophrenic patients. Seidman, Ap 512–514

Long-term perspectives on persons with chronic mental disorder (editorial). Manderscheid, Je 783–784

Neurological aspects of schizophrenia-like psychosis (letter). Aird, Oc 1362–1363

Phenomenological correlates of metabolic activity in 18 patients with chronic schizophrenia. Volkow, Fe 151–158 (letters: Meltzer; Kay, Oc 1366–1368)

Platelet serotonin concentration in schizophrenic patients. Kolakowska, Fe 232– 234

Relationship between anatomical and physiological brain pathology in schizophrenia: lateral cerebral ventricular size predicts cortical brain flow. Berman, Oc 1277–1282

Relationship between physical anomalies and age at onset of schizophrenia. Green, My 666–667

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Harding, Je 718–726

Vermont longitudinal study of persons with severe mental illness, II: long-term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727–735

Schizophrenia, Treatment of

β-Adrenergic blockers for aggressive behavior in schizophrenia (letters). Whitman; Pugh; reply of Sorgi, Ap, 538–539

Antipsychotic effect of buprenorphine in schizophrenia. Schmauss, Oc 1340–1342

Clonazepam in treatment of chronic schizophrenia (letter). Raines, No 1510

Comparative trial of pharmacologic strategies in schizophrenia. Carpenter, No 1466–1470

Familial schizophrenia and treatment response. Silverman, Oc 1271–1276

Hemodialysis in schizophrenia (letters). Carpenter; Frankenburg; reply of Asaad, Je 830

Neuroleptic responsivity of negative and positive symptoms in schizophrenia. Breier, De 1549–1555

Outpatient group therapy for schizophrenic substance abusers. Hellerstein, Oc 1337–1339

Pharmaco-epidemiology in 136 hospitalized schizophrenic patients. Zito, Je

Schizophrenia, panic anxiety, and alprazolam (letter). Kahn, Ap 527-528

Sustained remission in drug-free schizophrenic patients. Fenton, Oc 1306-1309

Use of ECT in United States in 1975 and 1980. Thompson, My 557-562

Schizotypal Personality Disorder

Difference in reaction time between subjects with schizotypal and borderline personality disorders. Chapin, Jy 948–950

Schneider, Kurt

First-rank symptoms as diagnostic clue to multiple personality disorder. Kluft, Mr 293–298 (letter: Fox, Oc 1377–1378) Scientific Theory

Empiricism and DSM-III (letters). Strahl; Schwartz; Raja; reply of Faust, Je 837– 838

Francis Bacon and DSM-III (letter). Sheeley, reply of Faust, Mr 385–386

More on empiricist and his new clothes (letters). Hankoff; Spital; Rifkin; reply of Faust, My 691–693

Season

Seasonal change in aggressivity (letter). Ronat, reply of Michael, Je 824–825 Seasonal Affective Disorder

Eye versus skin phototherapy of seasonal affective disorder. Wehr, Je 753-757

Morning versus midday phototherapy of seasonal affective disorder. Jacobsen, Oc 1301–1305

Seasonal affective disorder with summer depression and winter hypomania. Wehr, De 1602–1603

Treatment of patient with seasonal premenstrual syndrome. Parry, Je 762–766

Seizure

Facilitation of ECT by caffeine pretreatment. Shapira, Se 1199-1202

New technology in convulsive therapy: challenge in training (editorial). Fink, Se 1195–1198

Patients with panic attacks and abnormal EEG results. Edlund, Ap 508-509 (letter: Van Sweden, De 1624-1625)

Three patients with concomitant panic attacks and seizure disorder: possible clues to neurology of anxiety. Weilburg, Au 1053–1056

Use of caffeine to lengthen seizures in ECT. Hinkle, Se 1143–1148

Self-Injurious Behavior

Self-inflicted eye injury (letter). Oren, Fe 248–249

Self Psychology

Heinz Kohut's self psychology: overview. Baker, Ja 1–9 (letter: Valgemae, Se 1252) Serotonin

Hypomania induced by sertraline, a new serotonin reuptake inhibitor (letter). Laporta, No 1513–1514

Platelet serotonin concentration in schizophrenic patients. Kolakowska, Fe 232– 234

Serotonin reuptake inhibitors and DST status (letter). Holsboer, reply of Brown, Fe 263–264

Sertraline

Hypomania induced by sertraline, a new serotonin reuptake inhibitor (letter). Laporta, No 1513–1514

Sex Differences

Male and female psychiatrists and their patients. Fenton, Mr 358-361

Sex distribution of *DSM-III* personality disorders in psychiatric outpatients. Reich, Ap 485–488

Sex Offenders

Antiandrogen treatment of aberrant sexual activity (letter). Ross, No 1511

Sexual Abuse

Abused to abuser: antecedents of socially deviant behaviors. Burgess, No 1431– 1436

Assault experiences of 100 psychiatric inpatients: evidence of need for routine

inquiry. Jacobson, Jy 908-913

Childhood sexual and physical abuse as factors in adult psychiatric illness. Bryer, No 1426–1430

Long-term effects of incest (letter). Evenson, Jy 967–968

More on psychiatrist-patient sexual contact (letters). DeRosis; Carson, My 688-689

Past sexual victimization by females of male patients in adolescent medicine clinic population. Johnson, My 650-652

Psychiatrist-patient sexual contact (letter). Levenson, reply of Gartrell, Ap 529-530

Psychiatrist-patient sexual contact: results of national survey, II: psychiatrists' attitudes. Herman, Fe 164–169 (letter: Kavoussi, Se 1249–1250)

Rape and multiple personality disorder (letter). Ament, Ap 541

Reports of childhood incest and current behavior of chronically hospitalized psychotic women. Beck, No 1474–1476

Seasonal change in aggressivity (letter). Ronat, reply of Michael, Je 824–825

Should young children testify in cases of sexual abuse? Yates, Ap 476-480

Sexual Disorders

Anorgasmia caused by MAOI (letter). Jacobson, Ap 527

Nocturnal penile tumescence in depressed men. Thase, Ja 89–92

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Priapism treated with benztropine (letter). Greenberg, Mr 384–385

Reversal by bethanechol of imipramine-induced ejaculatory dysfunction (letter). Segraves, Se 1243–1244

Spontaneous remission of MAOI-induced anorgasmia. Nurnberg, Je 805–807

Treatment of premature ejaculation with lorazepam (letter). Segraves, Se 1240

Sexual Practices

Sexual practices among patients with borderline personality disorder. Zubenko, Je 748–752 (letter: Stone, De 1622–1623) Side Effects see Drug Side Effects

Skin

Eye versus skin phototherapy of seasonal affective disorder. Wehr, Je 753-757

Dream process in asthmatic subjects with nocturnal attacks. Monday, My 638-640 Long-term effects of extreme situational stress on sleep and dreaming. Hefez, Mr 344-347

Problem solving and creativity during sleep (letter). Schneck, De 1621–1622

Sleep EEG findings in depressed children and adolescents. Emslie, My 668–670

Sleep reduction as final common pathway in genesis of mania. Wehr, Fe 201–204; correction, Ap 542 (letter: Gillin, Se 1248)

Therapeutic effect of sleep deprivation in patients with premenstrual syndrome. Parry, Je 808–810

Smoking

Nicotine and panic attacks (letter). Dilsaver, Se 1245–1246

Nicotine and panic attacks (letter). Maany, reply of Hughes, Fe 255

Prevalence of tobacco dependence and withdrawal. Hughes, Fe 205–208

Smoking of prescription anticholinergic drugs (letter). Brower, Mr 383

Social Relationships

Discharged psychiatric patient: review of social, social-psychological, and psychiatric correlates of outcome. Avison, Ja 10–18

Lateral ventricular size and social network differentiation in young, nonchronic schizophrenic patients. Seidman, Ap 512– 514

Sodium see also Hyponatremia

DST status not predicted by serum sodium levels (letter). Hunt, reply of Tollefson, Se 1251–1252

Sodium Lactate

Clinical characteristics and response to sodium lactate of patients with infrequent panic attacks. Cowley, Je 795–798

Laboratory procedure for induction of flashbacks. Rainey, Oc 1317-1319

Solvents

Panic disorder precipitated by exposure to organic solvents in work place. Dager, Au 1056–1058

Psychiatrist and solvent-inhalant abuse: recognition, assessment, and treatment. Westermeyer, Jy 903-907

Somatization Disorder

Views of practicing psychiatrists on treatment of anxiety and somatoform disorders. Andrews, Oc 1331–1334

Somatostatin

CSF somatostatin in patients with Alzheimer's disease, older depressed patients, and age-matched control subjects. Sunderland, Oc 1313–1316

Sotalol

Comparison of propranolol, sotalol, and betaxolol in treatment of neuroleptic-induced akathisia. Dupuis, Je 802–805

South Oaks Gambling Screen

South Oaks Gambling Screen (SOGS): new instrument for identification of pathological gamblers. Lesieur, Se 1184–1188 Soviet Union

Soviet View of paranoid disorder (letter). Solyom, reply of Swanson, Ap 531–532 Space Exploration

Psychological and interpersonal issues in space. Kanas, Je 703–709

Specialization

Evolving subspecialization of psychiatry: implications for profession. Yager, No 1461–1465

New American Board of Medical Specialties publications (letter). Langsley, Mr 383

Speech

Differential diagnosis of mute patients (letter). David, reply of Altshuler, Au 1113

Spiritist Healing

Expectations and outcomes for patients given mental health care or spiritist healing in Puerto Rico. Koss, Ja 56-61

Standard Deviation

More on standard deviation versus standard error (letter). Thompson, reply of Bartko, Ap 540-541

State Hospitals see Hospital Psychiatry Statistics

More on standard deviation versus standard error (letter). Thompson, reply of Bartko, Ap 540–541

Reporting the proportions of variance explained (PVE) (letter). Thyer, My 690

Stress see also Posttraumatic Stress Disor-

Alterations in immunocompetence during stress, bereavement, and depression: focus on neuroendocrine regulation. Calabrese, Se 1123–1134

Controllable and uncontrollable stress in humans: alterations in mood and neuroendocrine and psychophysiological function. Breier, No 1419–1425

Discharged psychiatric patient: review of social, social-psychological, and psychiatric correlates of outcome. Avison, Ja 10–18

Long-term effects of extreme situational stress on sleep and dreaming. Hefez, Mr 344-347

Loss of vision due to central serous chorioretinopathy following psychological stress. Gelber, Ja 46-50

Prevalence of depression and distress in a large sample of Canadian residents, interns, and fellows. Hsu, De 1561–1566

Psychiatric problems of medical students and their spouses (letter). Myers, Ap 541-542

Psychological and interpersonal issues in space. Kanas, Je 703–709

Stress and psychiatric training (letter). Auster, Je 829

Stressful life events and onset of generalized anxiety syndrome. Blazer, Se 1178–1183 Stressful life events and psychiatric hospitalization of mentally retarded patients. Stack, My 661–663

Stroke

Poststroke mood disorders (letter). Van Sweden B, reply of Robinson, Oc 1372– 1374

Students

Changes in AIDS risk behaviors among homosexual male physicians and university students. Klein, Je 742–747

Sucrose

Effects of sugar and aspartame on aggression and activity in children. Kruesi, No 1487–1490

Suicide

Clinical predictors of suicide in patients with major affective disorders: controlled prospective study. Fawcett, Ja 35–40

Field test of Motto's Risk Estimator for

Suicide. Clark, Jy 923–926 Increased adrenal weight in victims of violent suicide. Dorovini-Zis, Se 1214–1215

Prevalence of specific suicidal behaviors in high school sample. Harkavy Friedman, Se 1203–1206

Relationship between Russian roulette deaths and risk-taking behavior: controlled study. Fishbain, My 563-567 (letter: Grosz, No 1519)

Suicide and homicide in United States: epidemiologic study of violent death, population changes, and potential for prediction. Holinger, Fe 215–219 Sulfonylureas

Profound hypoglycemia with addition of tricyclic antidepressant to maintenance sulfonylurea therapy. True, Se 1220–1221; correction, No 1521

Surgery

Association of elevated plasma anticholinergic activity with delirium in surgical patients. Golinger, Se 1218–1220

Complications of surgical treatment of obesity (letter). Ernsberger, reply of Stunkard, Je 833-834

Symptoms

Clinical correlates of platelet prostaglandin receptor subsensitivity in schizophrenia. Kanof, De 1556–1560

Consequences of abrupt reduction of chronic symptoms (letter). Satel, Oc 1362

First-rank symptoms as diagnostic clue to multiple personality disorder. Kluft, Mr 293–298 (letter: Fox, Oc 1377–1378)

Indochinese versions of Hopkins Symptom Checklist-25: screening instrument for psychiatric care of refugees. Mollica, Ap 497–500

International perspective on assessment of negative and positive symptoms in schizophrenia. Moscarelli, De 1595–1598

Neuroleptic responsivity of negative and positive symptoms in schizophrenia. Breier, De 1549–1555

Positive and negative subtypes in schizophrenia (letters). Meltzer; Kay; reply of Volkow, Oc 1366–1368

Understanding meaning of symptom (letter). Eppright, De 1620–1621

Systems Theory

Systems and structure of meaning (letter). Rifkin, reply of Schwartz, Jy 971–972

Time and meaning of human experience (letter). Kubacki, reply of Schwartz, My 693–694 (letter: Bromberg, Oc 1364)

т

Tarasoff Decision

Protecting third parties: decade after Tarasoff. Mills, Ja 68–74 (letter: Raskin, Au 1107)

Tardive Dyskinesia

Accelerometric assessment of tardive dyskinesia. Tryon, De 1584-1587

Clinical forms of severe tardive dyskinesia. Gardos, Jy 895–902

Clinical nonrecognition of neuroleptic-induced movement disorders: cautionary study. Weiden, Se 1148–1153

Follow-up study of 11 patients with potentially reversible tardive dyskinesia. Yagi, No 1496–1498

Tardive dyskinesia and neuroleptic-induced parkinsonism in Japan. Binder, No 1494–1496

Tardive dyskinesia: serious side effect? (letter). Dean, reply of Baldessarini, Fe 261–262

Tartrazine

Allergy to tartrazine in antidepressants. Pohl, Fe 237–238 (letter: Hollander, Se 1247)

Temperament

Temperament and intellectual development: longitudinal study from infancy to four years. Maziade, Fe 144-150

Tests, Psychological

Comparison of Diagnostic Interview Schedule and clinical diagnosis. Erdman, No 1477-1480

Defining "depression" (letter). Snaith, reply of Rodin, Je 828-829

Indochinese versions of Hopkins Symptom Checklist-25: screening instrument for psychiatric care of refugees. Mollica, Ap 497-500

South Oaks Gambling Screen (SOGS): new instrument for identification of pathological gamblers. Lesieur, Se 1184–1188

Washington University Sentence Completion Test compared with other measures of adult ego development. Vaillant, Se 1189–1194

Thiamine

Thiamine deficiency and psychosis (letter). Bakhai, My 687-688

Thioridazine

Interaction between thioridazine and naltrexone (letter). Maany, Jy 966

Priapism associated with concurrent use of thioridazine and metoclopramide (letter). Velek, Je 827–828

Thioridazine for peptic ulcer disease? (letter). Claman, reply of Shrivastava, Mr 392

Three Mile Island Nuclear Reactor

Mental health effects of Three Mile Island nuclear reactor restart. Dew, Au 1074– 1077

Thyroid

Mitral valve prolapse and thyroid abnormalities in patients with panic attacks.

Matuzas, Ap 493–496

Potentiation of antidepressants by T₃ and lithium (letter). Harrison, reply of Garbutt, Ap 530-531

Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493

Thyrotropin-Releasing Hormone

DST and TRH stimulation test in mood disorder subtypes. Levy, Ap 472-475

Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493

TSH and prolactin responses to TRH in patients with premenstrual syndrome. Roy-Byrne, Ap 480-484

TRH-induced TSH response in healthy volunteers: relationship to psychiatric history. Loosen, Ap 455–459

Thyroxine

Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493

Tics

Clinical comparison of Tourette's disorder and obsessive-compulsive disorder. Pitman, Se 1166–1171

Time

Time and meaning of human experience (letter). Kubacki, reply of Schwartz, My 693–694 (letter: Bromberg, Oc 1364)

Tobacco

Nicotine and panic attacks (letter). Dil-

saver, Se 1245-1246

Nicotine and panic attacks (letter). Maany, reply of Hughes, Fe 255

Prevalence of tobacco dependence and withdrawal. Hughes, Fe 205-208

Torture

Psychosocial impact of war trauma and torture on Southeast Asian refugees. Mollica, De 1567–1572

Torture and legal system (letter). Fuerst, reply of Schwerdt, Au 1113-1114

Tourette's Disorder

Clinical comparison of Tourette's disorder and obsessive-compulsive disorder. Pitman, Se 1166–1171

ECG changes during haloperidol and pimozide treatment of Tourette's disorder. Fulop, My 673-675

Jogging and Tourette's disorder (letter).

Jacome, Au 1100–1101

Onset of Gilles de la Tourette's syndrome before 1 year of age. Burd, Au 1066– 1067

Worsening of Tourette's disorder due to neuroleptic-induced akathisia. Weiden, Ap 504-505

Training see Education, Medical; Education, Psychiatric

Transference

Clinical implications of adult developmental theory. Colarusso, Oc 1263-1270

Transitional Objects

Transitional object use and borderline personality (letters). Adler; Goodwin; reply of Morris, Se 1250–1251

Tranylcypromine

Yohimbine- and tranylcypromine-induced postural hypotension (letter). Hsu, Ja 119

Trauma see also Posttraumatic Stress Disorder

Mania following head trauma. Shukla, Ja 93-96 (letter: Bell, Oc 1378-1379)

Psychosocial impact of war trauma and torture on Southeast Asian refugees. Mollica, De 1567–1572

Trazodone

Increased libido with trazodone (letter). Sullivan, Jy 967

Libido in women receiving trazodone (letters). Nakdimen; Jaffe; reply of Gartrell, Ja 123

Postural hypotension with syncope possibly precipitated by trazodone (letter). Spivak, No 1512–1513

Trazodone in treatment of panic disorder and agoraphobia with panic attacks. Mavissakalian, Je 785–787

Treatment, Involuntary, see Commitment, Civil; Right to Refuse Treatment

TRH see Thyrotropin-Releasing Hormone Trihexyphenidyl

Effects of amantadine and trihexyphenidyl on memory in elderly normal volunteers. McEvoy, My 573–577

Triidothyronine

Relationship of serum TSH concentration and antithyroid antibodies to diagnosis and DST response in psychiatric inpatients. Haggerty, No 1491–1493

Trimipramine

Trimipramine in treatment of obsessivecompulsive disorder (letter). Bartucci, Jy 964–965 TSH see Thyrotropin-Releasing Hormone Twins

Identical twins' nonidentical responses to lithium (letter). Hoffmann, Sc 1240-1241

Tyrosine

Open trial of L-tyrosine in treatment of attention deficit disorder, residual type Reimherr, Au 1071–1073

U

Ulcer

Thioridazine for peptic ulcer disease? (letter). Claman, reply of Shrivastava, Mr 392

Utilization see Mental Health Services, De livery of

v

Ventricular Size

Familial schizophrenia and treatment re sponse. Silverman, Oc 1271–1276

Increased ventricle-to-brain ratio in lateonset schizophrenia. Rabins, Se 1216– 1218

Lateral ventricular size and social network differentiation in young, nonchronic schizophrenic patients. Seidman, Ap 512-514

Relationship between anatomical and physiological brain pathology in schizophrenia: lateral cerebral ventricular size predicts cortical brain flow. Berman, Oc 1277–1282

Verapamil

Delirium induced by verapam: (letter).

Jacobsen, Fe 248

Mediation of "calcium antagonist" effects by dopamine receptor blockade (letter). Nurnberger, Jy 966–967

Vermont Longitudinal Research Project

Long-term perspectives on persons with chronic mental disorder editorial). Manderscheid, Je 783–784

Vermont longitudinal study of persons with severe mental illness, I: methodology, study sample, and overall status 32 years later. Harding, Je 718–726

Vermont longitudinal study of persons with severe mental illness, II: long term outcome of subjects who retrospectively met DSM-III criteria for schizophrenia. Harding, Je 727-735

Videotaping

Compact camcorders for teaching psychiatric interviewing (letter). Shaner, Se 1245

Ratings of videotaped simulated patient interviews and four other methods of evaluating psychiatry clerkship. Mumford, Mr 316–322

Violence

Abused to abuser: antecedents of socially deviant behaviors. Burgess, No 1431–1436

β-Adrenergic blockers for aggressive behavior in schizophrenia (letters). Whitman; Pugh; reply of Sorgi, Ap 538–539

Pugh; reply of Sorgi, Ap 538-539 Assault experiences of 100 psychiatric inpatients: evidence of need for routine inquiry. Jacobson, Jy 908-913

Childhood cruelty to animals and later ag-

gression against people: review. Felthous, Je 710-717

Clinical significance of command hallucinations. Hellerstein, Fe 219-221

Predictive validity of judgments of dangerousness in emergency civil commitment. McNiel, Fe 197–200

Seasonal change in aggressivity (letter). Ronat, reply of Michael, Je 824–825

Suicide and homicide in United States: epidemiologic study of violent death, population changes, and potential for prediction. Holinger, Fe 215–219

Vision

Loss of vision due to central serous chorioretinopathy following psychological stress. Gelber, Ja 46-50

Vitamins

Thiamine deficiency and psychosis (letter). Bakhai, My 687-688

Vomiting

Heroin-induced vomiting in bulimia (letter). Mitchell, Fe 249-250

W

War see also Combat

Posttraumatic stress disorder in Japanese prisoners of war (letter). Burges Watson, reply of Tennant, Au 1110-1111

Psychosocial impact of war trauma and torture on Southeast Asian refugees. Mollica, De 1567–1572

Survivors of imprisonment in Pacific theater during World War II. Goldstein, Se 1210-1213

Washington University Sentence Completion Test

Washington University Sentence Completion Test compared with other measures of adult ego development. Vaillant, Se 1189–1194

Water Intoxication

Prevention of episodic water intoxication with target weight procedure. Goldman, Mr 365-366 (letter: Koczapski, De 1626)

Weight

Influence of age and relative weight on cortisol suppression in normal subjects. Weiner, My 646–649

Prevention of episodic water intoxication with target weight procedure. Goldman, Mr 365-366 (letter: Koczapski, De 1626)

20-month follow-up study of 628 women with eating disorders, I: course and severity. Yager, Se 1172–1177

Withdrawal From Drugs

Carbamazepine, alprazolam withdrawal, and panic disorder (letter). Lawlor, reply of Klein, Fe 265–266

Clinical and chemical effects of lithium discontinuation (letter). Goodnick, Mr 385

Clonidine in benzodiazepine withdrawal (letter). Keshavan, Ap 530

Convulsions in patients abruptly withdrawn from clonazepam while receiving neuroleptic medication (letter). Ghadirian, My 686

Discontinuation of alprazolam treatment in panic patients. Fyer, Mr 303-308

Inadequate plasma concentrations in some high-dose methadone maintenance patients. Tennant, Oc 1349–1350

Prevalence of tobacco dependence and withdrawal. Hughes, Fe 205-208

Propranolol as adjunct to clonidine in opiate detoxification (letter). Roehrich, Au 1099–1100

Psychotropic drug withdrawal and dexamethasone suppression test. Kraus, Ja 82-85

Women

Libido in women receiving trazodone (letters). Nakdimen; Jaffe; reply of Gartrell, Ja 123

Pregnancy-related affective episodes among women with recurrent depression. Frank, Mr 288–293

Writers

Creativity and mental illness: prevalence rates in writers and their first-degree relatives. Andreasen, Oc 1288–1292

Υ

Yohimbine

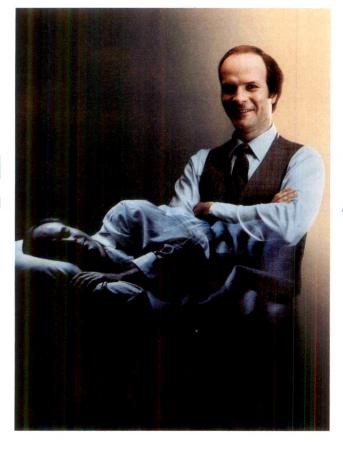
Neurobiological mechanisms of panic anxiety: biochemical and behavioral correlates of yohimbine-induced panic attacks. Charney, Au 1030–1036

Yohimbine- and tranylcypromine-induced postural hypotension (letter). Hsu, Ja 119



Helps Meet <u>Both</u> Goals Of Insomnia Therapy

Improved Sleep



Daytime Alertness

- Rapidly Absorbed
- Promptly Excreted

Upjohn

Kalamazoo, Michigan 49001 USA

© 1987 The Upjohn Company

Please see adjacent page for brief summary of prescribing information.

Halcion® Tablets

INDICATIONS AND USAGE: HALCION Tablets are indicated in the short-term management of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings, and/or

It is recommended that HALCION not be prescribed in quantities exceeding a one-month supply.

CONTRAINDICATIONS: Patients with known hypersensitivity to this drug or other

benzodiazepines.

HALCION is contraindicated in pregnant women due to potential fetal damage. Patients likely to become pregnant while receiving HALCION should be warned of the potential risk to the fetus.

WARNINGS: Overdosage may occur at four times the maximum recommended therapeutic dose. Patients should be cautioned not to exceed prescribed dosage.

Because of its depressant CNS effects, patients should be cautioned against engaging in hazardous occupations requiring complete mental alertness and also about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Anterograde amnesia and paradoxical reactions have been reported with HALCION and some other benzodiazepines.

PRECAUTIONS: General: in elderly and/or debilitated patients, treatment should be initiated at 0.125 mg to decrease the possibility of development of oversedation, dizziness, or impaired coordination. Caution should be exercised in patients with signs or symptoms of depression which could be intensified by hypnotic drugs. Suicidal tendencies and intentional overdosage is more common in these patients. The usual precautions should be observed in patients with impaired renal or hepatic function and chronic pulmonary insufficiency. *Infor*mation for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing prescribed dosage, (e) possible worsening of sleep after discontinuing HALCION. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistaminics, ethanol, and other CNS depressants. Pharmacokinetic interactions of benzodiazepines with other drugs have been reported, e.g., coadministration with either cimetidine or erythromycin reduced clear-ance, prolonged elimination half-life, and approximately doubled plasma levels of triazolam, hence increased clinical observation and consideration of dosage reduction may be appro-priate. Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of carcinogenic potential was observed in mice during a 24-month study with HALCION in doses up to 4000 times the human dose. *Pregnancy*: Benzodiazepines may cause fetal damage if administered during pregnancy. The child born of a mother who is on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity during the postnatal period. Nursing Mothers: Administration to nursing mothers is not recommended. Pediatric Use: Safety and efficacy in children below the age of 18 have not been established.

ADVERSE REACTIONS: During placebo-controlled clinical studies in which 1003 patients received HALCION Tablets, the most troublesome side effects were extensions of the pharmacologic activity of HALCION, e.g., drowsiness, dizziness, or lightheadedness.

	HALCION	Placebo	
Number of Patients	1003	997	
% of Patients Reporting:			
Central Nervous System Drowsiness	14.0	6.4	
Headache	9.7	8.4	
Dizziness	7.8	3.1	
Nervousness	5.2	4.5	
Lightheadedness	4.9	0.9	
Coordination Disorder/Ataxia	4.6	0.8	
Gastrointestinal			
Nausea/Vomiting	4.6	3.7	

In addition, the following adverse events have been reported less frequently (i.e., 0.9-0.5%): euphoria, tachycardia, tiredness, confusional states/memory impairment,

cramps/pain, depression, visual disturbances.

Rare (i.e., less than 0.5%) adverse reactions included constipation, taste alterations, diarrhea, dry mouth, dermatitis/allergy, dreaming/nightmares, insomnia, paresthesia tinnitus, dysesthesia, weakness, congestion, death from hepatic failure in a patient also receiving diuretic drugs.

The following adverse events have been reported in association with the use of benzodiazepines: dystonia, irritability, anorexia, fatigue, sedation, slurred speech, jaundice, pruritus, dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention.

As with all benzodiazepines, paradoxical reactions such as stimulation, agitation, increased muscle spasticity, sleep disturbances, hallucinations and other adverse behavioral effects may occur rarely and in a random fashion. Should these occur, use of the drug should be discontinued.

No laboratory changes were considered to be of physiological significance When treatment is protracted, periodic blood counts, urinalysis and blood chemistry

analyses are advisable Minor changes in EEG patterns, usually low-voltage fast activity have been observed in patients during HALCION therapy and are of no known significance.

DRUG ABUSE AND DEPENDENCE: Controlled Substance: HALCION Tablets are a Controlled Substance in Schedule IV. Abuse and Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Patients with a history of seizures are at particular risk. Addiction-prone patients should be closely monitored. Repeat prescriptions should be limited to those under medical supervision.

OVERDOSAGE: Because of the potency of triazolam, overdosage may occur at 2 mg, four times the maximum recommended therapeutic dose (0.5 mg). Manifestations of overdosage include somnolence, confusion, impaired coordination, slurred speech, and ulti mately, coma. Respiration, pulse, and blood pressure should be monitored and supported by general measure when necessary. Immediate gastric lavage should be performed. Multiple agents may have been ingested.

Store at controlled room temperature 15°-30°C (59°-86°F).

Caution: Federal law prohibits dispensing without prescription. B-3-S

Upjohn THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA J-7316 January 1987

WEST GEORGIA MEDICAL CENTER

MEDICAL DIRECTOR

Board Certified psychiatrist needed to assist in development, start-up, and medical management of a 30 bed adult psychiatric and substance abuse program in full service, regional 426 bed medical center, one hour from Atlanta, Georgia. Opportunity for private practice and salaried medical administration position. Excellent community, schools, recrea-

Call or send C.V. to:

Charles L. Foster, Jr., Administrator West Georgia Medical Center 1514 Vernon Road LaGrange, GA 30240 404 884-5708

The American Psychiatric Association and the Chinese Medical Association invite you to participate in a state of the art conference on scientific progress and collaboration in psychiatry.

August 14-18, 1988 Beijing, People's Republic of China

AMERICAN TASK FORCE:

Herbert Pardes, M.D., Chair Lawrence Hartmann, M.D. Roger Meyer, M.D.

CONTINUING MEDICAL EDUCATION CREDITS WILL BE OFFERED.

Travel packages will be arranged with options for extended trips outside of China through an APA-designated travel agent. Travel inside China will be arranged by the Chinese Medical Association.

For further information, please write to:

Ellen Mercer Office of International Affairs American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005

Phone: 202-682-6286

(mesoridazine) as the besylate indication in the second of the second of

An antipsychotic he can live with.

Please see following page for brief summary of prescribing information

(mesoridazine) besylate tablets USP (mesoridazine) besylate injection USP (mesoridazine) besylate oral solution USP

0000

Tablets: 10, 25, 50 and 100 mg Concentrate: 25 mg/ml

Injectable: 1 ml (25 mg)

Brief Summary of Prescribing Information

Contraindications: As with other phenothiazines, Serentil* (mesoridazine), is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

Warnings: *Tardive* Dyskinesia*. Tardive* dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with neuroleptic (antipsychotic) drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses.

neuroleptic drugs administrated to the patient inclease. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses. There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment, itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process. The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness 1) that is known to respond to neuroleptic drugs, and 2) for which alternative, equally effective but potentially less harmful treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically.

It signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

(For further information about the description of tardive dyskinesia and its clinical detection, please refer to the sections on Information for Patients and Adverse Reactions). Where patients are participating in activities requiring complete mental alertness (e.g., driving) it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually.

driving) it is advisable to administer the pnenothiazines cautiously and to inclease the dosage gradually. Usage in Pregnancy: The safety of this drug in pregnancy has not been established; hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus. Usage in Children: The use of Serentil (mesoridazine) in children under 12 years of age is not recommended, because safe conditions for its use have not been established. Attention should be paid to the fact that phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as attraction and phosphorus insecticides.

Precautions: While ocular changes have not to date been related to Serentil® (mesoridazine), one should be aware that such changes have been seen with other drugs of this class

(mesoridazine), one should be aware that such changes have been seen with other drugs of this class. Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least one-half hour after injection.

Leukopenia and/or agranulocytosis have been attributed to phenothiazine therapy. A single case of transient granulocytopenia has been associated with Serentil. Since convulsive seizures have been reported, patients receiving anticonvulsant medication should be maintained on that regimen while receiving Serentil.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Information for Patients: Given the likelihood that some patients exposed chronically to neuroleptics will develop tardive dyskinesia, it is advised that all patients in whom chronic use is contemplated be given, if possible, full information about this risk.

Adverse Reactions: Drowsiness and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity) and motoric effects) which occurred later i

reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiness, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos)

have been reported.

Autonomic Nervous System. Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and blurred vision have occurred in some instances.

Genitourinary System. Inhibition of ejaculation, impotence, enuresis, incontinence have been reported.

been reported.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects).

Phenothiazine Derivatives: It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drives is used:

effects have varied with the different prienotiniazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:

Autonomic Reactions: Miosis, obstipation, anorexia, paralytic ileus

Cutaneous Reactions: Erythema, exfoliative dermatitis, contact dermatitis.

Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.

Aliergic Reactions: Fever, laryngeal edema, angioneurotic edema, asthma.

Hepatotoxicity: Jaundice, biliary stasis.

Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the 0-T interval, lowering and inversion of the T wave and appearance of a wave tentatively identified as a bifid T or a U wave have been observed in some patients receiving the phenothiator tranquilitzers, including Serentil® (mesoridazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible. While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, it should be noted that sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing characteristic electrocardiographic changes while taking the drug. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. Hypotension, rarely resulting in cardiac arrest, has been noted.

noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions.

noted.
Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia.
Tardive Dyskinesia: Chronic use of neuroleptics may be associated with the development of tardive dyskinesia. The salient features of this syndrome are described in the Warnings section and below.
The syndrome is characterized by involuntary choreoathetoid movements which variously involve the tongue, face, mouth, lips, or jaw (e.g. protrusion of the tongue, puffing of cheeks, puckering of the mouth, chewing movements), trunk and extremities. The severity of the syndrome and the degree of impairment produced vary widely.
The syndrome may become clinically recognizable either during treatment, upon dosage reduction, or upon withdrawal of treatment. Movements may decrease in intensity and may disappear altogether if further treatment with neuroleptics is withheld. It is generally believed that reversibility is more likely after short rather than long-term neuroleptic exposure. Consequently, early detection of tardive dyskinesia is important. To increase the likelihood of detecting the syndrome at the earliest possible time, the dosage of neuroleptic drug should be reduced periodically (if clinically possible) and the patient observed for signs of the disorder. This maneuver is critical, for neuroleptic drugs may mask the signs of the disorder. This maneuver is critical, for neuroleptic drugs may mask the signs of the patient irregularities, altered libido, gynecomastia, lactation, weight gain, edema. False positive pregnancy tests have been reported.
Urinary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behavioral effects suggestive of a paradoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently, a peculiar skin-eye syndrome has been recognized as a side effect following long-term treatment with phenothiazines. This re

described as irregular or stellate in shape have also been reported. Systemic lupus erythematosus-like syndrome.

How Supplied:
Serentil® Tablets, for oral administration: 10 mg, 25 mg, 50 mg, and 100 mg mesoridazine (as the besylate). Bottles of 100.
Serentil® Ampuls, for intramuscular administration: 1 ml (25 mg mesoridazine (as the besylate)). Boxes of 20 and 100.
Serentil® Concentrate, for oral administration: Contains 25 mg mesoridazine (as the besylate) per ml, alcohol, USP 0.61% by volume.
Immediate containers: Amber glass bottles of 4 fl oz (118 ml) packaged in cartons of 19 bottles, with an accompanying dropper graduated to deliver 10 mg, 25 mg and 50 mg of mesoridazine (as the besylate).

Consult package insert before prescribing.

SF-BPI-9/85



Boehringer Ingelheim Pharmaceuticals, Inc. Ridgefield, CT 06877

SE-3459

THE AMERICAN JOURNAL OF PSYCHIATRY

Information for Contributors

GENERAL POLICIES

Manuscripts are accepted for consideration by the *American Journal of Psychiatry* with the understanding that they represent original material, have not been published previously, are not being considered for publication elsewhere, and have been approved by each author. Authors submitting manuscripts containing data or clinical observations already used in published papers or used in papers that are in press, submitted for publication, or to be submitted shortly should provide information on those papers to the Editor.

The requirements stated below are in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals."

Copyright Transfer and Submission Approval

The *Journal* requires written approval of manuscript submission by all authors in addition to express transfer of copyright to the American Psychiatric Association so that the author(s) and the Association are protected from misuse of copyrighted material. The following statement must be signed by all authors of a manuscript including statistical consultants who will be acknowledged in print:

The Author(s) undersigned hereby approves submission of this work and all subsequent revisions for publication and transfers, assigns, or otherwise conveys all copyright ownership to the American Psychiatric Association. I (we) warrant that this work represents original material and does not infringe upon the copyright of any third party; that no part of the work has been published or will be submitted for publication elsewhere unless and until it is rejected by *The American Journal of Psychiatry*; and that to the best of my (our) knowledge, the work contains no unlawful matter. I (we) agree to indemnify the Publisher against any loss or damages arising out of a breach of this agreement. In the event that my (our) submission is not published, copyright ownership shall revert to the Author(s).

Work done as part of an individual's duties as a federal employee is in the public domain. In such cases, the following wording should be used:

The work described in this paper was done as part of my (our) employment with the federal government and is therefore in the public domain. The Author(s) undersigned hereby approves submission of this work and all subsequent revisions and warrants that this work represents original material and does not infringe upon the copyright of any third party; that no part of the work has been published or will be submitted for publication elsewhere unless and until it is rejected by *The American Journal of Psychiatry*; and that to the best of my (our) knowledge, the work contains no unlawful matter. I (we) agree to indemnify the Publisher against any loss or damages arising out of a breach of this agreement.

In addition, authors must obtain letters of permission from publishers for use of extensive quotations (more than 500 words). The *Journal* does not publish tables or figures that have appeared in another English-language publication.

Disclosure of Commercial Interests

All forms of support, including drug company support, must be acknowledged in the author's footnote (see "Acknowledgments" under the Title Page section). Also, authors must disclose in their cover letter any commercial or financial involvements that might present an appearance of a conflict of interest in connection with the submitted article, including (but not limited to) institutional or corporate affiliations not already specified in the author's footnote, paid consultancies, stock ownership or other equity interests, and patent ownership. This information will be kept confidential and will not be shared with the reviewers. Such involvements will not be grounds for automatic rejection of the manuscript. Should the article be accepted for publication, the Editor and the authors will consult on whether, and to what extent, this information should be included in the published article.

Patient Anonymity

Ethical as well as legal considerations require careful attention to the protection of a patient's anonymity in case reports and elsewhere. Identifying information such as names, initials, hospital numbers, and dates must be avoided. In addition, authors should disguise identifying information about the characteristics and personal history of patients.

Informed Consent

Manuscripts that report the results of experimental investigation with human subjects must include a statement that informed consent was obtained after the procedure(s) had been fully explained. In the case of children, authors are asked to include information about whether the child's assent was obtained.

Review Process

All papers are reviewed to determine the originality, validity, and importance of content and conclusions. In addition to the regular review process, peer review for statistical content may be required for some manuscripts. This will be determined by the *Journal's* Statistical Editors. Authors will be sent reviewer comments that are judged to be useful to them. All reviewers remain anonymous. Once the

Editor has made a final decision on a paper, the authors of that paper will be informed.

SUBMISSION OF MANUSCRIPTS

The original manuscript and three copies should be submitted to John C. Nemiah, M.D., Editor, American Journal of Psychiatry, 1400 K St., N.W., Washington, DC 20005. All correspondence will be sent to the first-named author unless otherwise specified. Papers should be accompanied by a cover letter indicating that the paper is intended for publication and specifying for which section of the Journal it is being submitted (i.e., Special Article, Regular Article, Brief Communication, or Clinical and Research Report); papers will only be reviewed after such a statement has been received from the author.

Authors will be notified of the receipt of their paper and the number assigned to it. This number must be included in all further correspondence. It is imperative that the corresponding author of submitted papers notify the *Journal* of changes of address. Because of escalating postage costs, no manuscripts submitted to the *Journal* will be returned to authors except upon special request. Authors must make this request in their original submission letter and include a self-addressed, postage-paid envelope.

Prompt Publication Policy

Papers submitted with the request for prompt publication must meet stringent criteria of originality and be of major, immediate importance. Authors must state their reasons for wanting prompt publication in a cover letter to the Editor. These papers are given priority in scheduling; however, authors should be aware that the minimum publication time is 4 months. (This policy is automatic for all Clinical and Research Reports.)

Single Case Reports

Single case reports except for detailed longitudinal studies should be submitted as Letters to the Editor. All single case reports will be peer reviewed. Reports of successfully treated patients should include data on the number of patients treated unsuccessfully by the same method, with an indication of the temporal order of the successes and failures.

Annual Meeting Papers

Authors may submit their papers before the annual meeting, but such papers cannot be published until after the meeting. All papers must be accompanied by a statement that they are in final form. These papers are subject to the same peer review as other papers and must conform to the requirements for one of the types of articles specified in the next section.

TYPES OF ARTICLES

Special Articles

These are usually overview articles that bring together important information on a topic of general interest to psychiatry. Authors who have ideas for such articles are

advised to check with the Editorial Office to ensure that a similar work has not already been submitted. Special Articles may not exceed 7,500 words (no more than 25 double-spaced pages—including a précis of no more than 100 words, tables, and figures) and may not include more than 100 references.

Regular Articles and Brief Communications

The only difference between these two types of papers is length. Regular Articles contain no more than 3,800 words, including a précis of no more than 100 words, references, tables, and figures. Brief Communications contain no more than 2,500 words, including a précis of no more than 100 words, references, tables, and figures. (A table or figure that fills one-half of a vertical manuscript page equals 100 words of text; one that fills one-half of a horizontal page equals 150 words.) Articles that exceed 3,800 words will be returned unreviewed to the authors.

Clinical and Research Reports

A prompt publication policy (i.e., publication within 4 to 6 months after acceptance) is in effect for Clinical and Research Reports. Manuscripts may contain no more than one table and a maximum of 10 references; figures may not be used. Papers may contain a maximum of 1,300 words, including a précis of no more than 40 words, text, references, and an optional table (estimate 15 words per reference, 100 words for a double-spaced table that fills one-half of a vertical page, and 150 words for a double-spaced table that fills one-half of a horizontal page). These articles present 1) new research findings, 2) data from pilot studies, 3) worthwhile replication studies, and 4) clinical studies involving a number of patients. Essays, program descriptions, literature reviews, and single case reports do not meet the criteria for this section. Submissions that exceed 1,300 words or contain figures will be returned to the author.

Other Sections

Letters to the Editor. Brief letters (maximum of 500 words and 5 references; no tables or figures) will be considered if they include the notation "for publication." The number of words should appear in the upper right corner. Letters critical of an article published in the Journal will automatically be sent to the authors for reply. Because of space limitations not all letters can be printed. The Journal will notify authors about the disposition of their letters but does not return those that are not published. A letter must be signed by all of its authors. All letters will be edited; edited letters will not be sent to authors for approval. Letters must be typed double-spaced throughout on 8½×11 inch paper; three copies are required. Letters that do not meet these specifications will be returned for revision. Reprints are not available. Single case reports except for detailed longitudinal studies should be submitted as Letters to the Editor. Case reports submitted as Letters to the Editor will be peer reviewed.

Book Forum. Books for review may be sent to the Book Forum Editor, Nancy C. Andreasen, M.D., Ph.D., University of Iowa College of Medicine, 500 Newton Rd., Iowa City, IA 52242. Book reviews are usually solicited by the Book Forum Editor. Authors interested in reviewing a particular book should communicate directly with Dr. Andreasen. Reprints of reviews are not available.

TYPING AND ARRANGING THE PAPER

All parts of the manuscript, including case reports, quotations, references, and tables, must be double-spaced throughout. Manuscripts must be typed in upper- and lowercase on one side only of $8\frac{1}{2}\times11$ inch nonerasable bond paper. All four margins must be $1\frac{1}{2}$ inches. The manuscript should be arranged in the following order, with each item beginning a new page: 1) title page, 2) précis, 3) text, 4) references, and 5) tables and/or figures. All pages must be numbered.

STYLE SPECIFICATIONS

Title Page

The number of words, tables, and figures in the paper and the telephone number of the corresponding author should be typed in the upper right-hand corner of the title page. At least three key words that describe the content of the paper should be typed in the lower right corner of the page.

Title. The title should be informative and as brief as

possible. Two-part titles should be avoided.

By-line. Authors listed in the by-line should be limited to principal researchers and/or writers; collaborators may be acknowledged in a footnote. Authors' first names are preferred to initials. Degrees should be included after each author's name.

Previous presentation. If the paper has been presented at a meeting, please give the name of the meeting, the place, and the inclusive dates.

Location of work and address for reprints. Provide the department, institution, city, and state where the work was done. Include a full address for the author who is to receive

reprint requests.

Acknowledgments. Grant support should be acknowledged in a separate paragraph and should include the full name of the granting agency and grant number. The *Journal* does not allow acknowledgment of persons involved with the preparation or typing of manuscripts. Acknowledgment of individuals involved with the scientific content of the work should not exceed four typed lines. Drug company support of any kind must be acknowledged.

Précis

The précis, or short abstract, is a single paragraph no longer than 100 words for Special Articles, Regular Articles, and Brief Communications and no longer than 40 words for Clinical and Research Reports. Authors should use the active voice and the third person.

Text

Authors should use the active voice and first person; headings and subheadings should be inserted at reasonable intervals. Footnotes to text may not be used, and summaries are usually unnecessary.

Research design and statistics. The following information regarding research design should be included: 1) a clearly stated hypothesis, 2) the names of the statistical tests used, 3) whether tests were one- or two-tailed, and 4) what test was used for each set of data. Reporting of standard deviations, rather than standard errors of the mean, is required. Statistical tests that are not well known should be referenced. All significant and important nonsignificant results must include

the test value, degree(s) of freedom, and probability. For example, "The analysis of variance indicated that those who abstained from coffee had significantly higher course grades than those who did not abstain (F=4.32, df=3, 17, p<0.05)." Reviewers will evaluate the appropriateness of the analyses.

Abbreviations. Spell out all abbreviations (other than those for units of measure) the first time they are used. Idiosyncratic abbreviations should not be used.

Drugs. Generic rather than trade names of drugs should be used. Trade or manufacturers' names are used only if the drug or equipment is experimental or unavailable in this country or if such information is crucial to the evaluation of the results or replication of the study.

Tables and Figures

The *Journal* does not publish tables or figures that have appeared in other English-language publications. Tables and figures that duplicate 1) material contained in text or 2) each other will not be used. Authors will be asked to delete tables and figures that contain data which could be given succinctly in text. Each table and figure should be understandable without reference to the text; a descriptive, concise title should be included and units of measurement should be specified. Consult recent issues of the *Journal* for format. A table or figure that fills one-half of a vertical manuscript page equals 100 words of text; one that fills one-half of a horizontal page equals 150 words. A copy of each table and figure must be included with each copy of the manuscript.

Tables. Tables are reserved for presentation of numerical data and should not be used as lists or charts. Values expressed in the same unit of measurement should read down, not across; when percentages are given, the appropriate numbers must also be given. Tables should be double-spaced, no wider than 120 typewriter characters, including spaces, and no longer than 70 lines.

Figures. Figures express trends or relationships between data. Figures that contain numerical data which could be expressed more succinctly or clearly in tabular form will be converted to tables. Figures should be submitted as glossy or other camera-ready prints, and the author's name and the title of the paper should be written on a label affixed to the back of the figure. Figures must be able to withstand reduction to about 3½ inches.

References

References are numbered and listed by their order of appearance in text; the text citation is followed by the appropriate reference number in parentheses. Do not arrange the list alphabetically.

References should be restricted to closely pertinent material. Accuracy of citation is the author's responsibility. References should conform exactly to the original spelling, accents, punctuation, etc. Authors should be sure that all references listed have been cited in text.

Personal communications, unpublished manuscripts, manuscripts submitted but not yet accepted, and similar unpublished items should not appear in the reference list. Such citations may be noted in text. It is the author's responsibility to obtain permission to refer to another individual's unpublished observations. Manuscripts that are actually "in press" may be cited as such in the reference list; the name of the journal or publisher and location must be included.

Type references in the style shown below, double-spaced throughout. List up to three authors; designate one or more authors past the third as "et al." Abbreviations of journal names should conform to the style used in *Index Medicus*; journals not indexed there should not be abbreviated.

Stone AA: Mental Health and Law: A System in Transition. Rockville, Md, NIMH, 1975, pp 102–103

2. Glick ID, Hargreaves WA, Drues J, et al: Short versus long hospitalization, a prospective controlled study, VII: two year follow-up results for nonschizophrenics. Arch Gen Psychiatry 1977; 34:314-320

3. Rubinow DR, Post RM, Pickar D, et al: Relationship between urinary-free cortisol and CSF opiate binding activity in depressed patients and normal volunteers. Psychiatry Research (in

McNamara JR (ed): Behavioral Approaches to Medicine. New

York, Plenum Press, 1979

5. Janowsky DS, Judd LL, Huey L, et al: Effects of naloxone in normal, manic and schizophrenic patients: evidence for alleviation of manic symptoms, in Endorphins in Mental Health Research. Edited by Usdin E, Bunney WE Jr, Kline NS. New York, Oxford University Press, 1979

Smythe GA, Compton PJ, Lazarus L: Serotoninergic control of human growth hormone secretion: the actions of L-dopa and 2bromo-α-ergocyptine. Excer a Medica International Con-

gress Series 1976; 381:222-215

PROCESSING OF ACCEPTED MANUSCRIPTS

Manuscripts are accepted with the understanding that the Editor and the editorial staff ha the right to make revisions aimed at greater conciseness, clarity, and conformity with Journal style.

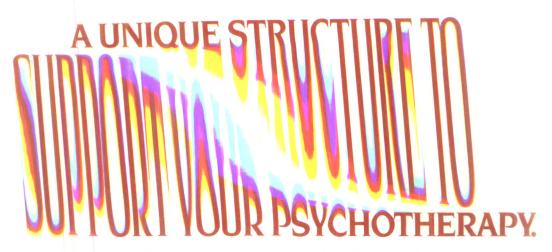
Accepted papers will be edited and sent to the first-named (or corresponding) author for corrections and answers to editorial queries. No proofs are sent to authors. Authors who will be away from their offices for a long period or who change address after notification of acceptance should inform the Journal staff.

PERMISSION TO REPRINT

Written permission to reprint material published in the Journal must be secured from the APA Periodicals Services Division, 1400 K Street, N.W., Washington, DC 20005; telephone: (202)682-6156. There is usually a charge for such permission, except for nonprofit classroom or library reserve use by instructors and educational institutions or for authors who wish to reprint their own material. Requests will be facilitated if accompanied by written permission from the author of the material.

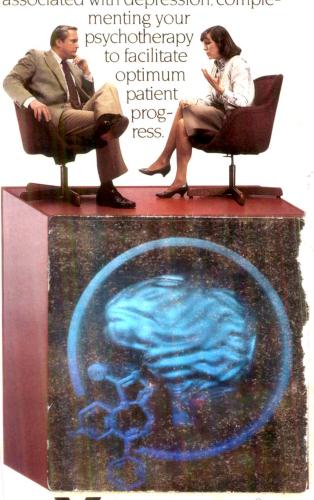
REPRINTS

No reprints are furnished gratis. An order form for reprints will be sent to the corresponding author before publication of the paper. The printer usually mails reprints approximately 6 weeks after the article has been published. Reprints of items in the Book Forum and Letters to the Editor sections are not available.



The incorporation of a triazolo ring to the basic benzodiazepine structure clearly differentiates Xanax from other benzodiazepines.

Xanax effectively relieves anxiety associated with depression, comple-





COMPLEMENTS AN EFFECTIVE THERAPEUTIC ALLIANCE

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.



XANAX* Tablets (alprazolam) @

CONTRAINDICATIONS

Patients with sensitivity to this drug or other benzodiazepines and in acute narrow angle glaucoma.

WARNINGS

Not of value in psychotic patients. Caution patients against hazardous occupations requiring complete mental alertness and about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Benzodiazepines can cause fetal harm in pregnant women. Warn patients of the potential hazard to the fetus. Avoid during the first trimester.

PRECAUTIONS

General: The dosage of XANAX Tablets should be reduced or withdrawn gradually, since withdrawal seizures have been reported upon abrupt withdrawal. If XANAX is combined with other psychotropics or anticonvulsant drugs, consider drug potentiation (see Drug Interaction section). Exercise the usual precautions regarding size of the prescription for depressed or suicidal patients. In elderly and debilitated patients, use the lowest possible dosage (see Dosage and Administration). Observe the usual precautions in treating patients with impaired renal or hepatic function.

Information for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing dose of the drug due to risk of dependence, (e) not stopping the drug abruptly. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistamines, ethanol and other CNS depressants. Pharmacokinetic interactions with ben-

zodiazepines have been reported. Drug/Laboratory Test Interactions: No consistent pattern for a specific drug or specific test. Carcinogenesis, Mutagenesis, Impairment of Fertility: No carcinogenic potential or impairment of fertility in rats. Pregnancy: See Warnings. Nonteratogenic Effects: The child born of a mother on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity. Labor and Delivery: No established use. Nursing Mothers: Benzodiazepines are excreted in human milk. Women on XANAX should not nurse. Pediatric Use: Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS

Side effects are generally observed at the beginning of therapy and usually disappear with continued medication. In the usual patient, the most frequent side effects are likely to be an extension of the pharmacologic activity of XANAX, eg, drowsiness or lightheadedness.

Central nervous system. Drowsiness, lightheadedness, depression, headache, confusion, insomnia, nervousness, syncope, dizziness, akathisia, and tiredness/sleepiness.

Gastrointestinal: Dry mouth, constipation, diarrhea, nausea/vomiting, and increased salivation.

increased salivation.

Cardiovascular: Tachycardia/
palpitations, and hypotension.

Sensory: Blurred vision.

Musculoskeletal: Rigidity and tremor.

Cutaneous: Dermatitis/allergy.

Other side effects: Nasal congestion,

weight gain, and weight loss.

In addition, the following adverse events have been reported with the use of benzodiazepines: dystonia, irritability, concentration difficulties, anorexia, transient amnesia or memory impairment, loss of coordination, fatigue, sedation, slurred speech, jaundice, musculoskeletal weakness, pruritus, diplopia,

dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention

Paradoxical reactions such as stimulation, agitation, increased muscle spasticity, sleep disturbances, and hallucinations may occur. Should these occur, discontinue the drug.

During prolonged treatment, periodic

During prolonged treatment, periodic blood counts, urinalysis, and blood chemistry analysis are advisable. Minor EEG changes of unknown significance have been observed

DRUG ABUSE AND DEPENDENCE

Physical and Psychological Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Withdrawal seizures have occurred upon rapid decrease or abrupt discontinuation of therapy. In all patients, dosage should be gradually tapered under close supervision. Patients with a history of seizures or epilepsy should not be abruptly withdrawn from XANAX. Addiction-prone individuals should be under careful surveillance. Controlled Substance Class: XANAX is a controlled substance and has been assigned to schedule IV.

CAUTION: FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.

B-4-S J-6338 January 1987

Upjohn

THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.

The incorporation of a triazolo ring to the basic benzodiazepine structure clearly differentiates Xanax from other benzodiazepines.

Xanax effectively relieves anxiety associated with depression, comple-





COMPLEMENTS AN EFFECTIVE THERAPEUTIC ALLIANCE

A UNIQUE STRUCTURE TO SUPPORT YOUR PSYCHOTHERAPY.



XANAX Tablets (alprazolam) @

CONTRAINDICATIONS

Patients with sensitivity to this drug or other benzodiazepines and in acute narrow angle glaucoma.

WARNINGS

Not of value in psychotic patients. Caution patients against hazardous occupations requiring complete mental alertness and about the simultaneous ingestion of alcohol and other CNS depressant drugs.

Benzodiazepines can cause fetal harm in pregnant women. Warn patients of the potential hazard to the fetus. Avoid during the first trimester.

PRECAUTIONS

General: The dosage of XANAX Tablets should be reduced or withdrawn gradually, since withdrawal seizures have been reported upon abrupt withdrawal. If XANAX is combined with other psychotropics or anticonvulsant drugs, consider drug potentiation (see Drug Interaction section). Exercise the usual precautions regarding size of the prescription for depressed or suicidal patients. In elderly and debilitated patients, use the lowest possible dosage (see Dosage and Administration). Observe the usual precautions in treating patients with impaired renal or hepatic function.

Information for Patients: Alert patients about: (a) consumption of alcohol and drugs, (b) possible fetal abnormalities, (c) operating machinery or driving, (d) not increasing dose of the drug due to risk of dependence, (e) not stopping the drug abruptly. Laboratory Tests: Not ordinarily required in otherwise healthy patients. Drug Interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistamines, ethanol and other CNS depressants. Pharmacokinetic interactions with ben-

zodiazepines have been reported. *Drug/Laboratory Test Interactions*: No consistent pattern for a specific drug or specific test. *Carcinogenesis, Mutagenesis, Impairment of Fertiitiy*: No carcinogenic potential or impairment of fertility in rats. *Pregnancy*: See Warnings. *Nonteratogenic Effects*: The child born of a mother on benzodiazepines may be at some risk for withdrawal symptoms and neonatal flaccidity. *Labor and Delivery*: No established use. *Nursing Mothers*: Benzodiazepines are excreted in human milk. Women on XANAX should not nurse. *Pediatric Use*: Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS

Side effects are generally observed at the beginning of therapy and usually disappear with continued medication. In the usual patient, the most frequent side effects are likely to be an extension of the pharmacologic activity of XANAX, eg, drowsiness or lightheadedness.

Central nervous system. Drowsiness, lightheadedness, depression, headache, confusion, insomnia, nervousness, syncope, dizziness, akathisia, and tiredness/sleepiness.

Gastrointestinal: Dry mouth, constipation, diarrhea, nausea/vomiting, and increased salivation.

Cardiovascular: Tachycardia/ palpitations, and hypotension.

Sensory: Blurred vision.

Musculoskeletal: Rigidity and tremor.

Cutaneous: Dermatitis/allergy.

Other side effects: Nasal congestion,
weight gain, and weight loss.

In addition, the following adverse events have been reported with the use of benzodiazepines: dystonia, irritability, concentration difficulties, anorexia, transient amnesia or memory impairment, loss of coordination, fatigue, sedation, slurred speech, jaundice, musculoskeletal weakness, pruritus, diplopia,

dysarthria, changes in libido, menstrual irregularities, incontinence and urinary retention.

Paradoxical reactions such as stimulation, agitation, increased muscle spasticity, sleep disturbances, and hallucinations may occur. Should these occur, discontinue the drug.

During prolonged treatment, periodic blood counts, urinalysis, and blood chemistry analysis are advisable. Minor EEG changes of unknown significance have been observed.

DRUG ABUSE AND DEPENDENCE

Physical and Psychological Dependence: Withdrawal symptoms have occurred following abrupt discontinuance of benzodiazepines. Withdrawal seizures have occurred upon rapid decrease or abrupt discontinuation of therapy. In all patients, dosage should be gradually tapered under close supervision. Patients with a history of seizures or epilepsy should not be abruptly withdrawn from XANAX. Addiction-prone individuals should be under careful surveillance. Controlled Substance Class: XANAX is a controlled substance and has been assigned to schedule IV.

CAUTION: FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.

B-4-S J-6338 January 1987

Upjohn

THE UPJOHN COMPANY Kalamazoo, Michigan 49001 USA

Are you reading the journal of clinical psychiatry?

a private practitioner, now more than ever you're aware of the need to stay informed on the economic, legal, and clinical issues affecting your practice. No other journal in the field addresses those practical, everyday concerns as honestly and as vigorously as Hospital and Community Psychiatry.

H&CP An Update

An Update on Tardive Dyskinesia

The latest in psychopharma cology

Confidentiality:
Winning for
a Change

Legal sues that directly affect year

H&CP

Economic

Discrimination

Against First

Against Elderly
Psychiatric
Patients Under
Medicare

The economics of your practice

ORDER FORM

American Psychiatric Association, Circulation Dept. 1400 K Street, N.W., Washington, D.C. 20005

Please send me one year (12 issues) of H&CP for just \$35 with this understanding—if I'm not satisfied, I may cancel my subscription and receive a refund for all unmailed issues.

☐ Bill me

☐ \$35 enclosed (Outside U.S., add \$16)

Address ____

City _______ State/Zip ______

Please allow 6-8 weeks for delivery of first is: .e

H7DC GF

THE BRITISH JOURNAL OF PSYCHIATRY

	NOVEMBER 1987	VOLUME 151	
Review Article			
AIDS-related psy	chiatric disorder. T.W. Fenton		579
Papers			
S. Lieberman	psychotherapy. A descriptive a	-	589
for audiotape fee	edback. S. Lieberman and J.P. (594
methods. B. Brod	ckman, A. Poynton, A. Ryle an	-	602
	ncepts of schizophrenic disorder mostic evaluation. R.O.A. Mak	and schizophreniform disorder: a anjuola and S.A. Adedapo	611
	schizophrenia in Nottingham. ris, J. Howat and J. Korer	J.E. Cooper, D. Goodhead,	619
Ecological structi in Nottingham. J	ure and the distribution of schi I.A. Giggs and J.E. Cooper	zophrenia and affective psychoses	627
the maintenance	nparison of half-dose and stand treatment of stabilised out-pati J.M. Ludlow, K. Street and R.	dard-dose flupenthixol decanoate in lents with schizophrenia. D.W. Taylor	634
Double-blind studisorders. J. Valle	dy of imipramine versus phenel ejo, C. Gasto, R. Catalan and I	zine in melancholias and dysthymic M. <i>Salamero</i>	639
Self-appraisal, an J.G. Ingham, N.I.	ixiety and depression in womer B. Kreitman, P. McC. Miller, S.	n: a prospective enquiry. P. Sashidharan and P.G. Surtees	643
	s and treatment outcome in deprevention. R.H. Corney	pressed women: a clinical trial of	652
	ordens: a study of the spouses of the spouse of	of depressed patients.	660
	s of violent behaviour: a prelim D. <i>Volkow and L. Tancredi</i>	ninary study with positron emission	668
A ten-year follow J. Gunn	v-up of men discharged from G	rendon prison. G. Robertson and	674
A ten-year follow A. Goldie	v-up study of Southampton opi	ate addicts. J.G. Edwards and	679
The prevalence o and M.J. Taylor	of bulimia nervosa: a replication	study. P.J. Cooper, D. Charnock	684
Brief Reports			
Validity study of Saudi patients. C	the Hospital Anxiety and Depr D.E.F.A. El-Rufaie and G. Abso	ression Scale among a group of od	687
A possible varian	nt of the neuroleptic malignant	syndome. C.F. Sullivan	689
Self-inflicted eye	injuries. T. Rogers and I. Puller	n	691
Paranoid psychos C.S. Thomas and		fulminating lethal case of AIDS.	693
T.J. Holden	associated with alcohol-induced	•	695
Ganser syndrome and A. Childs	e and its management. M.W.P.	Carney, T.K.N. Chary, P. Robotis	697



APA LIBRAKY AJD AKCHIVES

Answers to Questions Our Members Often Ask

Where is the Library and Archives?

The Library and Archives is on the third floor of the APA headquarters building at 1400 K Street N.W., Washington, D.C. The hours are 9 am to 5 pm Monday through Friday.

How can I use the Library and Archives?

You can request information by mail, telephone or personal visits.



Can I borrow books?

APA members (and cooperating libraries) may borrow books at no charge. The normal loan period is 4 weeks.

Can I get reprints of journal articles from the Library?

No. Reprints are available from authors. Libraries can only supply photocopies. We encourage you to make use of local sources for journals, but we will photocopy articles from our collection at the pre-paid cost of \$3 to members.

Is there a number I can call for answers?

Yes. (202) 682-6058 is the reference number. We try to answer questions right away, but sometimes we need time to gather information. We can usually respond within 24 hours.

Does the Library do computer searching?

Yes. (202) 682-6057 is the number to call to request a computer literature search. Because search requests require a signed form, it's a good idea to keep a supply on hand. Call and ask us to send some for your next project. Charges for members are cost plus

\$15; non-members, cost plus \$35. Turnaround time is 2 weeks. Records retrieved include full bibliographic citations and in most cases abstracts.

Can you help me find an article in Psychiatric News?

Yes. Call (202) 682-6080. The APA Library provides the only indepth indexing service for *Psychiatric News*. There is complete coverage since 1978.



Does the Library have audiovisual material? What kinds?

Yes. The AV collection includes audiocassettes and video-cassettes. The audio collection has taped symposia from annual meetings since 1976; the video collection has clinical presentations useful for staff and continuing medical education. The loan period is 3 weeks.



What's in the Archives?

The Archives holds the records created by the APA, such as minutes, reports, correspondence, and photographs. There are a few collections of papers of individual psychiatrists such as Daniel Blain, Leo Kanner and John C. Whitehorn. Additionally the Archives is the sole repository for the papers of Albert Deutch. There are tapes and transcripts from an oral history project, and a collection of artifacts that relate to the history of American psychiatry. These materials may be used in the Archives or photocopied, but they do not circulate.



Does the Library have a rare book collection?

Yes. Our rare book collection contains many valuable and first editions of early works that reflect the history of psychiatry. Among its volumes are first edition copies of Benjamin Rush's Medical Inquiries and Observation's Upon the Diseases of the Mind and Joseph Breuer and Sigmund Freud's Studien uber Hysteric.

The growth of this collection depends on gifts. However, the Library is not authorized to give appraisals for income—ax purposes.

Would you like me to donate my books and old journ als to the Library?

Yes. We are always pleased to receive gifts, but we must reserve the right to evaluate four gift for relevance to the Association and dispose of any books or journals we cannot use. Each donor is appropriately acknowledged on a bookplate attached to the volume.

Would the Library like a copy of my new book?

Absolutely! In fact the APA Library began in 1931 with a collection of autographed books by member-authors. This is a tradition we especially like to keep alive.

Address: APA Library 1400 K Street, N.W. Washington, D.C. 20005

Phone Numbers (Area Code 202):

| Reference | 682-6058 | Computer Searches | 682-6057 | 682-6080 | Archives | 682-6059 |

THE COLUMBIA-PRESBYTERIAN MEDICAL CENTER

DEPARTMENTS OF PSYCHIATRY, NEUROLOGY AND NEUROSURGERY

ANNOUNCE

THE CHARLES A. DANA FOUNDATION AWARDS

TO PREPARE CLINICAL INVESTIGATORS
BY PROVIDING TRAINING IN
BASIC SCIENCE

CANDIDATES FOR PSYCHIATRY AWARDS IN JULY 1988 SHOULD BE RESIDENTS OR RESEARCH FELLOWS NOW

REQUEST INFORMATION BY JANUARY 15, 1988

FROM

RONALD O. RIEDER, M.D., COORDINATOR

DANA CLINICAL NEUROSCIENCES TRAINING PROGRAM 722 WEST 168th STREET NEW YORK, N.Y., 10032

CPMC IS AN EEO/AA EMPLOYER .

PSYCHIATRIC UNIT DIRECTOR

Immediate opening for a Board Certified Psychiatrist to assume the responsibilities of Medical Director for a 13-bed (with possible expansion) inpatient mental health unit.

We require at least 2 years leadership experience in directing an inpatient hospital-based unit and excellent patient communication skills. Excellent compensation package (negotiable, depending upon experience). Opportunity for private practice if desired.

Please forward C.V. to:

Administration



community general hospital of sullivan county

Bushville Road
Harris, New York 12742
C.G.H. People . . . We Are The Hospital

an equal opportunity employer

Journaloscopy

Now it's easy to search for and read The American Journal of Psychiatry on a computer terminal



The American Journal of Psychiatry

is one of the new information sources available on



— the comprehensive, current, cost effective source of critical information you can access via computer terminal from your home, office or hospital

Sharpen your focus on medical information by completing this coupon today

	O Avenue of the Americ w York, N.Y. 10019	as
I own or have acce		
☐ computer	⊔ modem	
Dr	Specialty	
Address		
	Zip	
Phone No.	•	•

CALL TOLL FREE (800) 468-0908
In Pennsylvania or outside continental USA
CALL COLLECT (215) 527-4155

THE BEST CANDIDATE FOR YOUR POSITION OPENING MAY BE ONE OF *H&CP*'S 22,000 READERS



Psychiatrists, Psychologists, Nurses, Administrators, Therapists, Social Workers, Pharmacists, Educators

THEY ALL READ H&CP!

As the field's only monthly interdisciplinary journal, *H&CP* is the one place you can advertise each and every professional staff vacancy that arises within your treatment facility.

No other primary journal offers such a diversified professional audience and provides such an efficient medium for spreading your advertising message to the mental health professionals you want to reach.

And H&CP's advertising rates are reasonable, too.

Why don't you let H&CP work for you?

For more information, call Lisette Gibson at (202) 682-6156.

H&CP ADVERTISING American Psychiatric Association 1400 K Street, N.W. Washington, D.C. 20005

STAFF PSYCHIATRISTS: BOSTON

The Boston Psychiatric Group, P.C., has available staff psychiatrist positions in metropolitan Boston.

These fulltime positions offer the chance to participate in an exciting mix of public sector and academic psychiatry. Opportunity to be part of a growing group practice with ownership of stock available. A non profit, low overhead research institute is affiliated with the practice to accept grants for physicians. Eligible physicians will receive academic appointment.

Excellent compensation package includes fringe benefits tailored to individual needs.

Minority and Spanish-speaking physicians especially sought.

Send C.V. in confidence to: Richard C. Pillard, M.D. Boston Psychiatric Group, P.C. 85 E. Newton St. Boston, MA 02118

"LOOK TO US FIRST FOR A CAREER"

The Texas Department of Corrections is seeking applicants for the position of:

CHIEF PSYCHIATRIST



Candidates are being sought who are Board certified by the American Board of Psychiatry and Neurology and possess strong clinical (10 years) and supervisory (3 years) experience preferably in a correctional/institutional setting. The Chief Psychiatrist oversees all psychiatric services in a large correctional facility. Implements special programs which include in/out patient psychiatric and mental retardation health care plans. This individual supervises regional and unit psychiatrists and reports directly to the Medical Director. Excellent fringe benefits with no state income tax. Salary to \$92,304. Please send curriculum vitae to:

Texas Department of Corrections Medical Personnel P. O. Box 99 Huntsville, Texas 77342-0099 (409) 294-2755

AN EQUAL OPPORTUNITY EMPLOYER M/F

WE'RE LOOKING FOR AN ADOLESCENT PSYCHIATRIST COMMITTED TO EXCELLENCE...

We are currently seeking an Adolescent Psychiatrist, experienced in the management of teenage patients, who would be interested in joining another Adolescent Psychiatrist at one of our Psychiatric Centers in Florida.

These Centers offer:

- · Specialized staff
- Responsive ancillary services
- Special funds for medical education and clinical research for adolescent care

Qualified physicians must be able to:

- Work in conjunction with highly supportive hospital administrators and corporate executives
- Participate in medical education and clinical research in adolescent care
- · Select and train staff

If you are an Adolescent Psychiatrist committed to exellence, we'd like to talk to you about this outstanding opportunity. Please call, in confidence, Dr. Thomas D. Moore, Vice President – Medical Affairs, at 502/580-3554 for further information.



PSYCHIATRIST

Personable, biologically-oriented BE/BC psychiatrist needed to join hospital Medical Director entering private psychiatric practice. Expertise in assessment and somatic therapies a must. Help build a quality multidisciplinary clinic. Hospital is expanding its services to include geropsychiatry. New office adjacent to hospital. Referral area 250.000.

Paducah, KY, is an attractive small city located in scenic recreation area with nearby hunting, camping, and water sports, including sailing and bass fishing. Symphony, theater, nearby university among many cultural amenities.

For further information send CV and phone number to David A. Meyer, M.D., Lourdes Hospital, 1530 Lone Oak Road, Paducah, KY 42001. 1-800-626-5435 (USA) or 1-800-633-1178 (In Kentucky).

WESTERN KENTUCKY

• PSYCHIATRISTS •

Exciting opportunity for psychiatrists to establish practice in a progressive hospital system in an excellent community environment. The HealthEast System, located in Allentown, PA, is expanding its already major commitment to psychiatry and is now recruiting additional qualified psychiatrists who are interested in adult inpatient psychiatry, outpatient psychiatry, chemical dependency and psycho-geriatric services. Board certification or board eligibility required. Excellent financial arrangement is available. A superb opportunity. Allentown is in the growing Lehigh Valley region and is convenient to all major East Coast cities.

Contact in complete confidence John F. Mitchell, M.D., Chairman, Department of Psychiatry, The Allentown Hospital, 17th & Chew Streets, Allentown, PA 18102 (215-778-2810)



CHIEF OF PSYCHIATRY SERVICE

Vacancy exists for the Chief of Psychiatry Service at the Veterans Administration Medical Center, Highland Drive, Pittsburgh, Pennsylvania. Licensure in any State is acceptable. Applicant must be board certified and have an interest in academia and research. Psychiatry Service is a consolidated function associated with a 737-bed neuropsychiatric Medical Center and a 728-bed General/Medical Surgical Medical Center, both located in America's #1 rated "Most Livable City." Faculty appointment is available to qualified applicants. There is a full range of psychiatry treatment programs, including a Mental Hygiene Clinic, Day Hospital, Day Treatment, In and Outpatient Alcohol Treatment Program, Consultation Liaison and clinical research.

Excellent fringe benefits including special pay in addition to salary and 30 days paid vacation per year. Send C.V. to Daniel P. van Kammen, M.D., Ph.D., Chief of Staff, VA Medical Center, Highland Drive, Pittsburgh, PA 15206 or call (412) 363-4900, extension 223/244.

The VA is an Equal Opportunity Employer.

INDEX TO ADVERTISTERS

DECEMBER 1987

The publication of an advertisement in this journal does not imply endorsement of the product or service by the American Psychiatric Association.
BIOLOGIC SYSTEMS INCA2
BOEHRINGER INGELHEIM PHARMACEUTICALS INC. Serentil
CHARLES C THOMAS
CHARTER MEDICAL CORP
DORSEY PHARMACEUTICALS Mellaril
EMPLOYMENT OPPORTUNITIES A34, A46, A47, A49, A50
McNEIL PHARMACEUTICALS Haldol
MEAD JOHNSON PHARMACEUTICALS DIVISION BuSpar
MECTA CORPORATION
MEETINGS AND CONFERENCES
NICOLETA15
PDLAA9
ROCHE LABORATORIES Valium
ROERIG Navane A6-A8 Sinequan A17-A18
SMITH, KLINE AND FRENCH LABORATORIES Eskalith
THE UPJOHN COMPANY Halcion



Make sure they receive

1/2ma and not a substitute



tablets and tablet design

 Concentrate dropper calibrated in milligrams to facilitate dosage adjustment, as low as 1/2 mg.



For your







20mg

Haldo

The following is a brief summary only. Before prescribing, see complete prescribing information in HALDOL and HALDOL becancate product labelling.

Contraindications: Since the pharmacologic and clinical actions of HALDOL (haloperidol) Decancate are attributed to HALDOL. Some sections have been modified to reflect the prolonged action of HALDOL Decancate.

HALDOL is contraindicated in severe toxic central nervous system depression or comatose states from any cause and in individuals who are hypersensitive to this drug or have Parkinson's disease.

Marnings: Tardive Dyskinseis: Tardive dyskinseis, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with antipsychotic drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of antipsychotic treatment, which patients are likely to develop in the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of antipsychotic treatment, which patients are likely to develop the syndrome. Whether antipsychotic drug products differ in their potential to cause tardive dyskinesis aunknown. Both the risk of developing tardive dyskinesia and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of antipsychotic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment of sets to the syndrome may remit, partially or completely, if antipsychotic treatment is withdrawn and the prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic antipsychotic drugs, and provided to a manner tha

Precautions: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of transient hypotension and/or precipitation of anginal pain (if a vasopressor is required, epinephrine should not be used since HALDOL may block its vasopressor activity and paradoxical further lowering of blood pressure may occur; metaraminol, phenylephrine or norepinephrine should be used); (2) receiving anticonvulsant medications, with a history of seizures, or with EEG abnormalities, because HALDOL may lower the convulsive threshold. If indicated, adequate anticonvulsant therapy should be concomitantly maintained; (3) with known allergies or a history of allergic reactions to drugs; (4) receiving anticoagulants, since an isolated instance of interference occurred with the effects of one anticoagulant (phenindione). Concomitant antiparkinson medication, if required, may have to be continued after HALDOL is discontinued because of different excretion rates; if both are discontinued simultaneously, extrapyramidal symptoms may occur. Intraocular pressure may increase when HALDOL is used for mania in bipolar disorders, there may be a rapid mood swing to depression. Severe neurotoxicity may occur in patients with thyrotoxicosis receiving antipsychotic medication, including HALDOL. The 1, 5 and 10 mg HALDOL tablets contain FD&C Yellow No. 5 (tartrazine) which may cause allergic-type reactions (including bronchial asthma) in certain susceptible individuals, especially in those who have aspirin hypersensitivity.

Information for Patients: Mental and/or physical abilities required for hazardous tasks or driving may be impaired. Alcohol should be avoided due to possible additive effects and hypotension.

Drug Interactions: Patients: Mental and/or physical abilities required for hazardous tasks or driving may be impaired. Alcohol should be avoided due to possible additive effects and hypotension. Precautions: Administer cautiously to patients: (1) with severe cardiovascular disorders, due to the possibility of

opiates, and alcohol

opiates, and alcohol. Carcinogenesis. Mutagenesis and Impairment of Fertility: No mutagenic potential of haloperidol decanoate was found in the Ames Salmonella microsomal activation assay.

Carcinogeneity studies using oral haloperidol were conducted in Wistar rats (dosed at up to 5 mg/kg daily for 24 months) and in Albino Swiss mice (dosed at up to 5 mg/kg daily for 18 months). In the rat study survival was less than optimal in all dose groups, reducing the number of rats at risk for developing tumors. However, although a relatively greater number of rats survived to the end of the study in high dose male and female groups, these animals did not have a greater incidence of tumors than control animals. Therefore, although not optimal, this

study does suggest the absence of a haloperidol related increase in the incidence of neoplasia in rats at doses up to 20 times the usual daily human dose for chronic or resistant patients. In female mice at 5 and 20 times the highest initial daily dose for chronic or resistant patients, there was a statistically significant increase in pituitary gland neoplasia and total tumor incidence; at 20 times the same daily dose there was a statistically significant increase in pituitary gland neoplasia. In male mice, no statistically significant differences in incidences of total tumors or specific tumor types were noted.

Antipsychotic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, genomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of antipsychotic drugs. Neither clinical studies nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis: the available evidence is considered too limited to be conclusive at this time.

Usage in Pregnancy: Pregnancy Category C. Safe use in pregnancy or in women likely to become pregnant has not been established; use only if benefit clearly justifies potential hazards to the fetus.

Nursing Mothers: Infants should not be nursed during drug treatment.

Pediatric Use: Controlled trials to establish the safety and effectiveness of intramuscular administration in children have not been conducted.

Adverse Reactions: Adverse reactions following the administration of HALDOL (haloperidol) Decanoate are those of HALDOL. Since vast experience has accumulated with HALDOL, the adverse reactions are reported for that compound as well as for HALDOL Decanoate. As with all injectable medications, local tissue reactions have been

Adverse Reactions: Adverse reactions following the administration of HALDOL (halopendol) Decanoate are those of HALDOL. Since vast experience has accumulated with HALDOL, the adverse reactions are reported for that compound as well as for HALDOL Decanoate.

CNS Effects: Extrapyramidal Reactions—Neuromuscular (extrapyramidal) reactions have been reported trequently, often during the first few days of treatment. Generally they involved Parkinson-like symptoms which when first observed were usually mid to moderately severe and usually reversible. Other types of neuromuscular reactions (motor restlessness, dystonia, akathisia, hyperreflexia, opistholonos, oculogyric crises) have been reported far less frequently, but were often more severe. Severe extrapyramidal reactions have been reported at relatively low doses. Generally, extrapyramidal symptoms are dose-related since they occur at relatively high doses and disappear or become less severe when the dose is reduced. Antiparkinson drugs may be required. Persistent extrapyramidal reactions have been reported and the drug may have to be discontinued in such cases. Withdrawal Emergent Neurological Signs—Abrupt discontinuation of short-term antipsychotic therapy is generally uneventful. However, some patients on maintenance treatment experience transient dyskinetic signs after abrupt withdrawal. In certain cases these are indistinguishable from "Tardive Dyskinesia" —As with all antipsychotic agents HALDOL has been associated with persistent dyskinesias. Iardive Dyskinesia" —As with all antipsychotic agents HALDOL shaped by the production and the drug may appear in some patients appear inversible. Involuntary, dyskinetic movements, may appear in some patients appear inversible. The syndrome is characterized by rhythmical involuntary movements of the syndrome as paging and involuntary movements of extremities and the trunk. There is no known effective treatment for tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements,

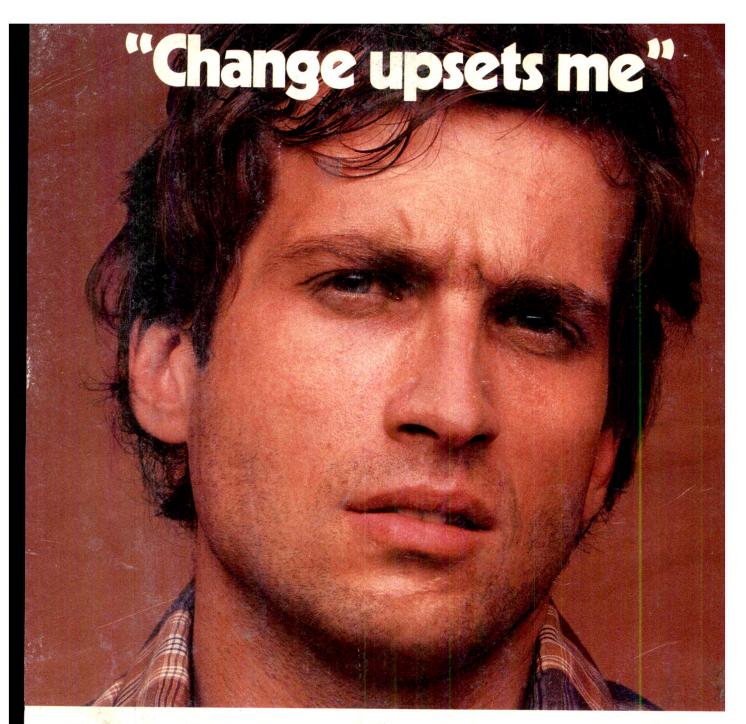
prescribed.

For information on symptoms and treatment of overdosage, see full prescribing information.

The short-acting HALDOL injectable form is intended only for acutely agitated psychotic patients with moderately severe to very severe symptoms.

6/3/87





Most patients with psychotic symptoms need a quiet, undemanding life that provides refuge from a confusing and overwhelming world."

You can help avoid one potentially stressful change by making sure your patients receive the unique HALDOL Tablet they can recognize.











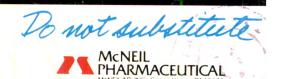




Patient portrayed by professional model.

Please see brief summary of Prescribing Information on the preceding page.

McNEILAB, INC 1986



^{*}Emphasis added

¹ Grinspoon L (ed). Care and treatment of schizoprenia—Part II, in The Harvard Medical School Mental Health Letter 1986; 3(1) 1